



May 8, 2024

VIA EMAIL: RosaM.Romero@emnrd.nm.gov
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Ms. Rosa M. Romero
Environmental Bureau Chief
State of New Mexico – Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

Re: Apache Corp., EBDU #37 Incident NDHR1922141227 (1RP-5636) - Scope of Work for Additional Investigation, Lea County, New Mexico

Dear Ms. Romero:

Larson & Associates, Inc. (LAI), on behalf of Apache Corp. (Apache), has prepared this scope of work (SOW) for the produced water release at the East Blinbry Drinkard Unit (EBDU) #37 (Site) located in Unit E (SW/4, SW/4), Section 13, Township 21 South and Range 37 East in Lea County, New Mexico. The geodetic position is North 32.479569° and West - 103.122061°. Mr. William "Bill" Stevens is the surface owner. Figure 1 presents a topographic map.

The SOW is in response to video/telephone calls on April 1, 2024 and May 1, 2024, between Apache, New Mexico Oil Conservation Division (NMOCD) and LAI representatives. During the call on April 1, 2024, NMOCD requested Apache to:

- Install additional monitoring well (TMW-28) north of TMW-11 and TMW-12 to establish the northern (upgradient) limit or background for chloride in groundwater.
- Install additional monitoring well south (TMW-25) of TMW-23 and TMW-24 to establish the southern extent for chloride in groundwater.
- Determine the source for chloride (5,850 mg/L) reported in the groundwater sample from monitoring well TMW-17.
- Implement measures to prevent further impact to the onsite water well (windmill) from chloride.
- Collect and analyze groundwater samples from the water well (windmill) for the entire list of constituents in 20.6.2.3102 NMAC including Human Health Standards in A (1) (a) through (tt), Other Standards for Domestic Water Supply in B. (1) through (10), and Standards for Irrigation Use in C (1) through (5).

On May 1, 2024, the following was requested:

- Install a monitoring well (TMW-29) north (up gradient) from monitoring well TMW-13.
- Update the analytical data table with complete analysis of the groundwater sample collected from the windmill on April 3, 2024.
- Collect and analyze groundwater samples for barium from monitoring wells TMW-1, TMW-3, and TMW-21.

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Background

On July 14, 2019, Apache reported a produced water release from a flowline at a pipeline junction located about 720 feet east from EBDU Well #37. Produced fluids (oil and water) flowed west about 350 feet west from the release origin, and south about 450 feet before terminating in low-lying area. The volume of the release and recovered fluid are unknown. Appendix A presents the initial C-141.

The spill area was remediated according to a remediation plan titled, "1RP-5636 REMEDIATION PLAN, East Blinbry Drinkard Unit #37 Produced water Spill, Lea County, New Mexico", submitted to the NMOCD October 29, 2019. On December 23, 2019, NMOCD approved the remediation plan addendum based on a telephone call on December 20, 2019 (Bradford Billings) with following conditions:

- Installed four (4) monitoring wells (TMW-1 through TMW-4).
- Performed quarterly (4 times per year) groundwater monitoring from monitoring wells and a water well (windmill).

In all, Apache has spent over \$750,000 to ensure the remediation was thorough and properly done in accordance with the NMOCD approved plan.

Investigations

Between November 28 and 30, 2022, at NMOCD's request, Apache installed two (2) monitoring wells (TMW-5 and TMW-6) east of the playa where the release terminated. Soil samples were collected from seven (7) bores including BH-1, BH-3, BH-4, and BH-5 located in the playa with the remaining bores (BH-6, BH-7, and BH-8) located in the release corridor north of the playa.

Following a conference call with NMOCD On April 4, 2023, Apache installed four (4) additional monitoring wells (TMW-7 through TMW-10) near the sources for the release (TMW-7), north of the playa (TMW-8) and west (TMW-9) and east (TMW-10) of TMW-1 near the south end of the playa. Figure 2 presents an aerial map for the soil borings and monitoring wells.

Apache requested LAI to prepare a plan for installing additional monitoring wells following a call with NMOCD on October 30, 2023. The plan was submitted to NMOCD on November 10, 2023. Between November 29, 2023 and December 13, 2023, Scarborough Drilling Inc. (SDI), under LAI oversight, installed fourteen (14) additional monitoring wells (TMW-11 through TMW-24) at locations specified in the scope of work (SOW) approved by NMOCD on November 14, 2023. NMOCD specified a monitoring well (TMW-17) be installed halfway between existing monitoring well TMW-5 and proposed monitoring well TMW-15. SDI drilled the inner ring of monitoring wells (TMW-11 through TMW-16) prior to installing the outer ring of monitoring wells (TMW-18 through TMW-22) based on laboratory analysis of groundwater samples for chloride. Two (2) additional wells (TMW-23 and TMW-24) installed south of TMW-18 and TMW-19 based on field chloride tests. Figure 2 presents the monitoring well locations. Appendix B presents NMOCD communications. Appendix C presents the laboratory chloride analysis.

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SDI installed the monitoring wells in 5-inch diameter borings that were advanced with an air rotary rig between about sixty (60) feet (TMW-24) and eighty-nine (89) feet bgs. The monitoring wells were constructed in accordance with ASTM Designation: D5092 - Reapproved 2010 (*Standard Practice for Design and Installation of Groundwater Monitoring Wells*) with 2-inch diameter schedule 40 PVC casing and twenty (20) feet of 0.010-inch factory slotted screen that was positioned above and below the groundwater level observed during drilling. Graded silica sand was placed in the annuls between the borehole and well to about 2-feet above the screen. The remainder of the annulus was filled to about 1-foot bs with bentonite chips and hydrated with potable water. The wells were secured with locking steel covers anchored concrete. Land Point Surveying, Midland, Texas, a State of New Mexico licensed professional land surveying firm, surveyed the wells for location and elevation including ground surface and top of casing (TOC). Drill cuttings were examined based on the Unified Soil Classification System (USCS) according to ASTM Designation: D2487 (*Standard Practice for Classification of Soils for Engineering Purposes*). Table 1 presents the monitoring well drilling and completion details. Appendix D presents the lithologic logs and well completion records.

Monitoring wells TMW-20 through TMW-24 terminated in silty clay (red bed) of the Triassic-age Chinle Formation (Dockum Group) between about sixty-three (63) feet bgs (TMW-24) and seventy-eight (78) feet bgs (TMW-20). An unconformity occurs between the silty clay (Chinle Formation) and overlying Ogallala Formation, consisting of fine-to-fine grained quartz sand. There are few distinctions between the Ogallala Formation and overlying Blackwater Draw Formation with color being a distinction from reddish yellow to reddish orange. The sand thickness increases from east to west towards Monument Draw and is mostly controlled by the eroded Chinle Formation. A layer of carbonate-indurated sand (caliche) likely caused where a zone of illuviation where carbonate dust accumulated from surface transportation by meteoric water movement, occurs above the sand and extends from near the surface and to about twenty (20) feet bgs. Figure 3 presents an aerial drawing showing the monitoring well locations lines of geological cross sections. Figure 3a through Figure 3d present the geological cross sections.

On December 20 and 21, 2023, groundwater was recorded in the Ogallala Formation between about 46.91 feet bgs (TMW-1) and 65.97 feet bgs (TMW-22). The saturated thickness ranged from about 6.97 feet (TMW-24) to greater than 26.22 feet (TMW-18). The groundwater potentiometric surface elevation ranged between 3,365.57 feet above mean sea level (MSL) at TMW-12 (up gradient) and 3,362.33 feet above MSL at TMW-24 (down gradient). The groundwater flow direction was generally from north to south at a gradient of about 0.003 feet per foot. Figure 4 presents the groundwater saturated thickness map for December 20 and 21, 2023. Figure 5a presents the groundwater potentiometric surface map for December 20 and 21, 2023.

On March 14, 2024, groundwater was recorded in the Ogallala Formation between about 46.78 feet bgs (TMW-1) and 65.96 feet bgs (TMW-22). Between December 21, 2023 and March 14, 2024, depth to groundwater decreased (rising aquifer conditions) between 0.01 feet (TMW-22) and 1.38 feet (TMW-11). During this same period, depth to groundwater increased 0.06 feet (TMW-05) and 0.98 feet (TMW-19) which represents falling aquifer conditions. The rising and lowering groundwater conditions are likely the result of seasonal fluctuation in the aquifer. On March 14, 2024, the groundwater potentiometric surface elevation ranged between 3,365.65 feet above mean sea level (MSL) at TMW-12 (up gradient) and 3,362.84 feet above MSL at TMW-23 (down gradient). The groundwater flow direction was generally from north to south at a gradient of about 0.003 feet per foot. Groundwater mounding near well TMW-4 from a slightly elevated groundwater potentiometric surface elevation causes groundwater to flow to the west, east and south. A slight reversal in the groundwater flow direction was observed in the vicinity of TMW-19 and TMW-24, from increased (rising) groundwater

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potentiometric surface elevation in TMW-24 (3,362.40 feet) and decreased (falling) groundwater potentiometric surface elevation at TMW-19 (3,361.88 feet) causes groundwater to flow towards TMW-19. Figure 5b presents the groundwater potentiometric surface map for March 14, 2024.

Groundwater samples were collected from monitoring wells with the TMW-1 through TMW-24 and the windmill on December 20 and 21, 2023 and March 14, 2024. Duplicate samples were collected for laboratory quality assurance and quality control (QA/QC) from wells TMW-17 and TMW-2 on December 20 and 21, 2023, respectively, from TMW-3 and TMW-14 on March 14, 2024. The groundwater samples, except from the windmill, were collected using the low stress or low flow method, according to EPA protocol (EQASOP-GW4, Revision 4, September 19, 2017). The low stress or low flow method where an environmental pump was submerged near the middle of the water column and the well was pumped at a low rate until environmental parameters stabilized. Groundwater samples were collected from the discharge of the dedicated disposable Tygon® tubing. Groundwater samples from the windmill were collected from the end of the discharge pipe before the stock tank. The Tygon® tubing was discarded after each use and the pump was thoroughly cleaned with a solution of potable water and laboratory grade detergent (Alconox®) and rinsed with distilled water. The samples were delivered under preservation and chain of custody to Eurofins Xenco Laboratories, Midland, Texas, which analyzed the samples for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA SW-846 Method 8021B, chloride by EPA Method 300 and total dissolved solids (TDS) by Method SM2540C. Table 2 presents the laboratory analytical data summary. Appendix E presents the laboratory reports.

BTEX compounds were not reported in the groundwater samples at concentrations above the analytical reporting limits (RP) in samples including duplicate samples collected on December 20 and 21, 2023 or March 14, 2024.

On December 20 and 21, 2023, chloride was reported in groundwater samples from monitoring wells TMW-1 through TMW-24 and the windmill at concentrations from 37.3 mg/L in monitoring well TMW-10 to 5,850 mg/L in groundwater from monitoring well TMW-17. The background chloride concentration was 463 mg/L (TMW-12). The chloride concentration in the windmill sample was 409 mg/L. On March 14, 2024, chloride was reported in groundwater samples at concentrations from 17.0 mg/L (TMW-10) to 5,680 mg/L (TMW-17). The background chloride concentration was 448 mg/L from monitoring well TMW-12. The chloride concentration in the windmill sample was 471 mg/L. Figure 6a and Figure 6b present isopleth maps for chloride concentrations in groundwater samples collected on December 20 and 21, 2023 and March 14, 2024, respectively.

On December 20 and 21, 2023, TDS was reported in groundwater samples from the monitoring wells and windmill at concentrations from 404 mg/L (TMW-9) and 10,300 mg/L (TMW-17). The background TDS concentration was 1,520 mg/L (TMW-12). The TDS concentration in the windmill sample was 1,010 mg/L. On March 14, 2024, chloride was reported in at concentrations from 373 mg/L (TMW-9) to 8,930 mg/L (TMW-17). The background TDS concentration was 1,390 mg/L from monitoring well TMW-12. The TDS concentration in the windmill sample was 1,080 mg/L. Figure 7a and Figure 7b present isopleth maps for TDS concentrations in groundwater samples collected on December 20 and 21, 2023 and March 14, 2024, respectively.

On April 3, 2024, at the request of NMOCD, Apache requested LAI personnel to collect a groundwater sample from the windmill for analysis of New Mexico Water Quality Control Commission (WQCC) human health, domestic water quality and irrigation "3103" parameters in 20.6.2.3103 NMAC. The sample was collected from the discharge pipe near the windmill

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and delivered under preservation and chain of custody to Xenco laboratories located in Midland, Texas. Table 3 presents the laboratory data summary. Appendix F presents the laboratory reports.

The laboratory reported barium (2.18 mg/L) and chloride (440 mg/L) above the WQCC human health and domestic water quality standards of 2.0 mg/L and 250 mg/L, respectively, on April 3, 2024.

On May 2, 2024, following the video/telephone call on May 1, 2024, LAI personnel collected groundwater samples from monitoring wells TMW-1, TMW-3, TMW-21, and windmill. The samples were delivered under preservation and COC to Xenco, which analyzed the samples for dissolved barium by EPA SW-846 Method 6020B. Table 2 presents the monitoring well and windmill analytical data summary. According to 20.6.2.3103, "the standards apply to the dissolved portion of the contaminants specified with a definition of dissolved being that given in the publication *methods for chemical analysis of water and waste of the U.S. environmental protection agency*", with the exception that standards for mercury, organic compounds and non-aqueous liquids shall apply to the total nonfiltered concentrations of the contaminants". The initial sample from the windmill (April 3, 2024) was an unfiltered (total) analysis and therefore not valid for comparison to the standards in 20.6.2.3103NMAC. Samples collected on May 2, 2024, were filtered by the laboratory, and represent dissolved barium concentrations which are below the NMWQCC human health standard of 2.0 mg/L in 20.6.2.3103A(1) NMAC. The dissolved barium concentrations reported between 0.0299 mg/L (TMW-3) and 0.445 mg/L (TMW-1). The dissolved barium concentration in the windmill sample on May 2, 2024, was 0.220 mg/L.

Apache does not believe the any additional analysis is necessary and will discontinue collecting samples from the windmill for the "3103" parameters.

Scope of Work

Apache suspects the source of the chloride in groundwater from TMW-17 to be the same source for the spill. The source may have begun as an undetected pin-hole leak that migrated vertically to groundwater resulting in a density-driven chloride plume that migrated southward along the lower contact with the Triassic Dockum Group. To investigate this possible source scenario, boring BH-9 will be drilled near the junction box and monitoring well TMW-7. The soil samples will be collected with an air rotary rig beginning at ground surface and every five (5) feet to approximately fifty-five (55) feet bgs. The samples will be submitted to Xenco under chain of custody and analyzed for chloride by EPA Method 300. Figure 8 presents the approximate boring location.

Apache will install five (5) additional monitoring wells (TMW-25 through TMW-29) at locations shown on Figure 8a and Figure 8b. Monitoring well TMW-25 will be installed about 500 feet south of TMW-23 and TMW-24 to establish the downgradient limit of chloride in groundwater. Monitoring well TMW-26 will be installed about halfway between TMW-20 and TMW-23 to establish the downgradient and cross gradient concentration of chloride in groundwater. Monitoring well TMW-27 will be installed about 275 feet north-northwest of TMW-17 to confirm if chloride in groundwater is migrating southward from the junction box and is a suspect source for the release. This well will be completed as a recovery test well further described below. Monitoring well TMW-28 will be installed about 375 feet north of TMW-11 and TMW-12 to establish the up gradient or background chloride concentration in groundwater. Monitoring well TMW-29 will be installed about 375 feet north of TMW-13 to evaluate an additional source for the chloride and to establish the up gradient or background chloride concentration in groundwater.

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Applications will be prepared and submitted to the State of New Mexico Office of the State Engineering (NMOSE) for approval and prior to installing monitoring wells TMW-25 through TMW-29. The wells will be installed about twenty (20) feet into the uppermost groundwater unit calculated to occur at depths between about fifty-five (55) feet at TMW-27 and TMW-28 and sixty (60) feet bgs at the remaining locations. Drilling will terminate about two (2) feet into the lower confining unit (Triassic Dockum Group), if encountered. The wells will be completed in a nominal 5-inch diameter bore except MW-27 that will be advanced with an air rotary rig. Potable water may be introduced during drilling to remove drill cuttings from the boreholes. The lithologies will be described and logs prepared according to ASTM D-2487 (*Standard Practice for Classification of Soils for Engineering Purposes*). The wells will be secured with locking steel covers anchored into a concrete apron measuring about 3 by 3 feet and about 4-inches thick. Land Point Surveying, Midland, Texas, will survey the wells for position and elevation including natural ground and top of casing (TOC). The following is a summary of the calculated depth to groundwater, proposed drilling and well screen depths:

Monitoring Well	Depth to Groundwater, Feet bgs	*Well Depth, Feet bgs	Well Screen Interval, Feet bgs
TMW-25	60	80	60 – 80
TMW-26	60	80	60 – 80
TMW-27	55	95	75 - 95
TMW-28	55	75	55 – 75
TMW-29	60	80	60 - 80

*Drilling will terminate about 2 feet into the lower confining unit (red bed) if encountered.

The wells will be developed by pumping with an electric submersible or mechanical pump to remove sediment disturbed during drilling and well installation. The pump will be fitted with new polyethene discharge tubing that will be discarded between wells. The foot valve will be thoroughly cleaned between wells with a solution of laboratory-grade detergent (Alconox®) and rinsed distilled water. Purged water and sediment will be captured in 55-gallon drums for disposal in a NMOCD permitted Class II commercial salt-water disposal (SWD) well.

Groundwater will be allowed to recover to near the pre-development level before collecting groundwater samples. Depth to groundwater will be gauged at TOC with an electronic water level meter. Groundwater samples will be collected from each monitoring well including the existing monitoring wells (TMW-1 through TMW-24) using the low stress or low flow method according to EPA protocol (EQASOP-GW4, Revision 4, September 19, 2017) where an environmental pump is submerged near the middle of the water column and the well is pumped at a low rate until environmental parameters stabilize. Groundwater samples were collected from discharge through disposable Tygon® tubing. The tubing was discarded after each use and the pump was thoroughly cleaned with a solution of potable water and Alconox® and rinsed with distilled water. The sample from the windmill will be collected from the pump discharge pipe. The samples will be transferred to labeled laboratory containers, packed in an ice chest filled with ice, and delivered under chain of custody Xenco in Midland, Texas. Two (2) duplicate samples will be collected for laboratory quality assurance and quality control (QA/QC). Xenco will analyze the samples for benzene, toluene, ethylbenzene, xylene (BTEX) according to EPA SW-846 Method SW-8260D, cations (calcium, magnesium, potassium, and sodium) by Method SW-6020B, anions (chloride and sulfate) by EPA Method 300, alkalinity by EPA Method M-2320B, and total dissolved solids (TDS) by EPA Method M-2540C.

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Remediation

Apache proposes to complete monitoring well TMW-27 as a remediation test well (RW-1). The well will be installed in an appropriately sized borehole that will be advanced using air and water rotary drilling methods to near the top of the lower confining unit (red bed) estimated to occur between about eighty-five (85) and ninety-five (95) feet bgs. Potable water will be used to remove drill cuttings from the boreholes. The well will be constructed with a 5-inch schedule 40 PVC casing and screen with glued joints as no organic compounds (i.e., BTEX) have been detected in groundwater samples. The well screen approximately 20 to 25 feet in length will be 0.020-inch factory slotted and will be positioned near the bottom of the borehole. The well screen will be surrounded with graded silica sand or gravel compatible with the screen opening (0.020 inches) and will extend from near the bottom of the well to about 2 feet above the screen. The remaining annulus above the sand will be filled with bentonite chips to approximately 1-foot bgs and hydrated with potable water. An electric submersible pump will be used to evaluate the well yield and radius of influence during a pumping test. Water from drilling and pumping the well will be captured in portable (frac) tanks and disposed of in an NMOCD permitted commercial saltwater disposal (SWD) well. Options for managing the pump discharge during remediation will be evaluated based on the pumping test. Apache will work with the State of New Mexico Office of the State Engineer (OSE) for authorization to produce water from the recovery well for the remediation project. Apache will conduct semi-annual (twice yearly) monitoring of groundwater in the monitoring wells (TMW-1 through TMW-28 and recovery well (RW-1). The samples will be analyzed for BTEX, chloride, and TDS. It is anticipated that the groundwater remediation system will be operated between approximately 3 and 5 years. Apache will submit the remediation program results to the NMOCD in annual (once per year) reports that will include a summary of water volumes recovered and treated, laboratory analytical data summary tables, groundwater potentiometric surface maps, isopleth maps for chloride and TDS, and laboratory reports. Apache will provide notification to NMOCD and landowner at least 7 days in advance of each event, excluding weekends.

Apache will discontinue monitoring groundwater from the windmill for WQCC human health, domestic water quality and irrigation standards in 20.6.2.3103, based on only barium (2.18 mg/L) and chloride (440 mg/L) being detected above the WQCC human health and domestic water quality standards of 2.0 mg/L and 250 mg/L, respectively, on April 3, 2024.

Your approval of this SOW for additional investigation and proposed remediation test well is requested. Please contact Barrett Bole with Apache at (432) 818-1108 or email Barrett.Bole@apachecorp.com, Bruce Baker with Apache at (432) 631-6982 or email Larry.Baker@apachecorp.com, Daniel St. Germain at (432) 664-5357 or dstgermain@laenvironmental.com or me to discuss any questions you may have.

Respectively,

Larson & Associates, Inc.



Mark J. Larson, P.G.
President/Sr. Hydrogeologist
Certified Professional Geologist #10490

Encl.

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Tables

Table 1
Monitoring Well Completion and Gauging Summary
Apache Corporation, EBDU 37
Incident ID: nDHR1922141227
Lea County, New Mexico

Well Information									Groundwater Data				
Well No.	Date Drilled	Well Depth (Feet TOC)	Drilled Depth (Feet BGS)	Well Diameter (inches)	Surface Elevation (Feet AMSL)	Screen Interval (Feet BGS)	Casing Stickup (Feet)	TOC Elevation (Feet AMSL)	Date Gauged	Depth to Water (feet TOC)	Depth to Water (feet BGS)	Water Column Height (feet)	Groundwater Elevation (feet AMSL)
TMW-1	9/19/2019	65.85	62.50	2	3,411.21	42.32 - 61.97	3.36	3,414.57	09/23/2019	46.18	42.82	28.18	3,368.39
									12/26/2019	48.90	45.54	26.27	3,365.67
									09/30/2020	49.31	45.95	16.54	3,365.26
									12/07/2020	49.42	46.06	16.43	3,365.15
									03/11/2021	49.41	46.05	16.44	3,365.16
									06/10/2021	49.67	46.31	16.18	3,364.90
									10/11/2021	50.90	47.54	14.95	3,363.67
									12/22/2021	49.95	46.59	15.90	3,364.62
									03/01/2022	49.92	46.56	15.93	3,364.65
									05/23/2022	50.25	46.89	15.60	3,364.32
									08/16/2022	50.64	47.28	15.21	3,363.93
									12/15/2022	50.18	46.82	15.67	3,364.39
									03/14/2023	50.16	46.80	15.69	3,364.41
									06/22/2023	47.09	43.73	18.76	3,367.48
									09/06/2023	50.31	46.95	15.54	3,364.26
									12/21/2023	50.27	46.91	15.58	3,364.30
									03/14/2024	50.14	46.78	15.71	3,364.43
TMW-2	9/19/2019	70.85	80.00	2	3,421.30	47.50 - 67.17	2.86	3,424.16	09/23/2019	55.80	52.94	15.05	3,368.36
									12/26/2019	57.50	54.64	13.35	3,366.66
									09/30/2020	58.01	55.15	12.84	3,366.15
									12/07/2020	58.08	55.22	12.77	3,366.08
									03/11/2021	58.00	55.14	12.85	3,366.16
									06/10/2021	58.12	55.26	12.73	3,366.04
									10/11/2021	58.54	55.68	12.31	3,365.62
									12/22/2021	58.50	55.64	12.35	3,365.66
									03/01/2022	58.48	55.62	12.37	3,365.68

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Monitoring Well Completion and Gauging Summary
Apache Corporation, EBDU 37
Incident ID: nDHR1922141227
Lea County, New Mexico

Well Information									Groundwater Data				
Well No.	Date Drilled	Well Depth (Feet TOC)	Drilled Depth (Feet BGS)	Well Diameter (inches)	Surface Elevation (Feet AMSL)	Screen Interval (Feet BGS)	Casing Stickup (Feet)	TOC Elevation (Feet AMSL)	Date Gauged	Depth to Water (feet TOC)	Depth to Water (feet BGS)	Water Column Height (feet)	Groundwater Elevation (feet AMSL)
									05/23/2022	58.62	55.76	12.23	3,365.54
									08/16/2022	58.98	56.12	11.87	3,365.18
									12/15/2022	58.76	55.90	12.09	3,365.40
									03/14/2023	58.70	55.84	12.15	3,365.46
									06/22/2023	58.27	55.41	12.58	3,365.89
									09/06/2023	59.05	56.19	11.80	3,365.11
									12/21/2023	58.95	56.09	11.90	3,365.21
									03/14/2024	58.86	56.00	11.99	3,365.30
TWM-3	9/29/2020	71.29	68.41	2	3,420.33	49.96 - 69.76	2.88	3,423.21	09/23/2019	--	--	--	--
									12/26/2020	--	--	--	--
									09/30/2020	57.62	54.74	13.67	3,365.59
									12/07/2020	57.68	54.80	13.61	3,365.53
									03/11/2021	57.59	54.71	13.70	3,365.62
									06/10/2021	57.90	55.02	13.39	3,365.31
									10/11/2021	58.31	55.43	12.98	3,364.90
									12/22/2021	58.18	55.30	13.11	3,365.03
									03/01/2022	58.14	55.26	13.15	3,365.07
									05/23/2022	58.41	55.53	12.88	3,364.80
									08/16/2022	58.87	55.99	12.42	3,364.34
									12/15/2022	58.44	55.56	12.85	3,364.77
									03/14/2023	58.36	55.48	12.93	3,364.85
									06/22/2023	57.53	54.65	13.76	3,365.68
									09/06/2023	58.85	55.97	12.44	3,364.36
									12/21/2023	58.61	55.73	12.68	3,364.60
									03/14/2024	58.47	55.59	12.82	3,364.74
TMW-4	9/29/2020	73.25	70.09	2	3,420.03	49.96 - 69.76	3.16	3,423.19	09/23/2019	--	--	--	--

Table 1
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Apache Corporation, EBDU 37
Incident ID: nDHR1922141227
Lea County, New Mexico

Well Information									Groundwater Data				
Well No.	Date Drilled	Well Depth (Feet TOC)	Drilled Depth (Feet BGS)	Well Diameter (inches)	Surface Elevation (Feet AMSL)	Screen Interval (Feet BGS)	Casing Stickup (Feet)	TOC Elevation (Feet AMSL)	Date Gauged	Depth to Water (feet TOC)	Depth to Water (feet BGS)	Water Column Height (feet)	Groundwater Elevation (feet AMSL)
									12/26/2019	--	--	--	--
									09/30/2020	57.39	54.23	15.86	3,365.80
									12/07/2020	57.45	54.29	15.80	3,365.74
									03/11/2021	57.40	54.24	15.85	3,365.79
									06/10/2021	57.60	54.44	15.65	3,365.59
									10/11/2021	57.99	54.83	15.26	3,365.20
									12/22/2021	57.90	54.74	15.35	3,365.29
									03/01/2022	57.87	54.71	15.38	3,365.32
									03/29/2022	57.89	54.73	15.36	3,365.30
									05/23/2022	58.05	54.89	15.20	3,365.14
									08/16/2022	58.48	55.32	14.77	3,364.71
									12/15/2022	58.15	54.99	15.10	3,365.04
									03/14/2023	58.07	54.91	15.18	3,365.12
									06/22/2023	57.28	54.12	15.97	3,365.91
									09/06/2023	58.45	55.29	14.80	3,364.74
									12/20/2023	58.31	55.15	14.94	3,364.88
									03/14/2024	58.19	55.03	15.06	3,365.00
TMW-5	11/28/2022	78.59	75.50	2	3,418.91	54.37 - 74.32	2.95	3,421.86	12/15/2022	57.91	54.96	20.68	3,363.95
									03/14/2023	57.27	54.32	21.32	3,364.59
									06/22/2023	55.63	52.68	22.96	3,366.23
									09/06/2023	57.63	54.68	20.96	3,364.23
									12/20/2023	57.49	54.54	21.10	3,364.37
TMW-6	11/28/2022	72.10	73.00	2	3,424.13	54.37 - 74.32	2.42	3,426.55	03/14/2024	57.55	54.60	21.04	3,364.31
									12/15/2022	62.17	59.75	9.93	3,364.38
									03/14/2023	62.08	59.66	10.02	3,364.47

Table 1
Monitoring Well Completion and Gauging Summary
Apache Corporation, EBDU 37
Incident ID: nDHR1922141227
Lea County, New Mexico

Well Information									Groundwater Data				
Well No.	Date Drilled	Well Depth (Feet TOC)	Drilled Depth (Feet BGS)	Well Diameter (inches)	Surface Elevation (Feet AMSL)	Screen Interval (Feet BGS)	Casing Stickup (Feet)	TOC Elevation (Feet AMSL)	Date Gauged	Depth to Water (feet TOC)	Depth to Water (feet BGS)	Water Column Height (feet)	Groundwater Elevation (feet AMSL)
									06/22/2023	61.41	58.99	10.69	3,365.14
									09/06/2023	61.95	59.53	10.15	3,364.60
									12/20/2023	61.88	59.46	10.22	3,364.67
									03/14/2024	61.79	59.37	10.31	3,364.76
TMW-7	6/13/2023	83.85	80.99	2	3,423.07	61.29 - 80.78	2.86	3,425.93	06/19/2023	60.35	57.49	23.50	3,365.58
									06/22/2023	63.34	60.48	20.51	3,362.59
									09/06/2023	60.98	58.12	22.87	3,364.95
									12/20/2023	60.91	58.05	22.94	3,365.02
									03/14/2024	60.81	57.95	23.04	3,365.12
TMW-8	6/12/2023	76.55	73.75	2	3,417.28	53.83 - 73.74	2.80	3,420.08	06/20/2023	54.04	51.24	22.51	3,366.04
									06/22/2023	54.02	54.00	22.53	3,366.06
									09/06/2023	55.39	52.59	21.16	3,364.69
									12/20/2023	55.23	52.43	21.32	3,364.85
									03/14/2024	55.12	52.32	21.43	3,364.60
TMW-9	6/13/2023	71.90	69.03	2	3,414.62	49.41 - 68.72	2.87	3,417.49	06/21/2023	51.11	48.24	20.79	3,366.38
									06/22/2023	51.14	48.27	20.76	3,366.35
									09/06/2023	53.66	50.79	18.24	3,363.83
									12/21/2023	53.55	50.68	18.35	3,363.94
									03/14/2024	53.45	50.58	18.45	3,364.76
TMW-10	6/14/2023	72.76	69.81	2	3,415.26	49.68 - 68.99	2.95	3,418.21	06/20/2023	51.57	48.62	21.19	3,366.64
									06/22/2023	51.61	48.66	21.15	3,366.60
									09/06/2023	54.21	51.26	18.55	3,364.00
									12/21/2023	54.12	51.17	18.64	3,364.09
									03/14/2024	54.02	51.07	18.74	3,364.19
TMW-11	11/29/2023	76.75	73.95	2	3,421.56	53.30 - 73.27	2.80	3,424.35	12/21/2023	59.92	57.12	16.83	3,364.43
									03/14/2024	58.85	56.05	17.90	3,365.50

Table 1
Monitoring Well Completion and Gauging Summary
Apache Corporation, EBDU 37
Incident ID: nDHR1922141227
Lea County, New Mexico

Well Information									Groundwater Data				
Well No.	Date Drilled	Well Depth (Feet TOC)	Drilled Depth (Feet BGS)	Well Diameter (inches)	Surface Elevation (Feet AMSL)	Screen Interval (Feet BGS)	Casing Stickup (Feet)	TOC Elevation (Feet AMSL)	Date Gauged	Depth to Water (feet TOC)	Depth to Water (feet BGS)	Water Column Height (feet)	Groundwater Elevation (feet AMSL)
TMW-12	11/30/2023	85.73	82.81	2	3,424.30	60.16 - 82.13	2.92	3,427.22	12/21/2023	61.65	58.73	24.08	3,365.57
									03/14/2024	61.57	58.65	24.16	3,365.65
TMW-13	12/4/2023	86.67	83.90	2	3,426.21	63.24 - 83.21	2.77	3,428.98	12/20/2023	63.75	60.98	22.92	3,365.23
									03/14/2024	63.68	60.91	22.99	3,365.30
TMW-14	12/1/2023	88.64	85.61	2	3,426.78	64.96 - 84.93	2.76	3,429.54	12/20/2023	65.02	62.26	23.62	3,364.52
									03/14/2024	64.99	62.23	23.38	3,364.55
TMW-15	11/30/2023	83.14	79.62	2	3,423.18	58.97 - 78.94	2.79	3,425.97	12/20/2023	61.79	59.00	21.35	3,364.18
									03/14/2024	61.71	58.92	58.92	3,364.26
TMW-16	11/29/2023	84.82	81.79	2	3,420.73	59.14 - 81.11	2.92	3,423.65	12/20/2023	60.19	57.27	24.63	3,363.46
									03/14/2024	60.08	57.16	24.63	3,363.57
TMW-17	11/28/2023	84.68	81.46	2	3,422.52	60.81 - 80.78	3.16	3,425.68	12/20/2023	61.56	58.40	23.12	3,364.12
									03/14/2024	61.43	58.27	23.19	3,364.25
TMW-18	12/5/2023	88.57	85.05	2	3,422.29	64.57 - 84.51	3.32	3,425.61	12/20/2023	62.15	58.83	26.42	3,363.46
									03/14/2024	62.01	58.69	26.56	3,363.60
TMW-19	12/5/2023	83.50	80.31	2	3,420.79	59.66 - 79.63	2.99	3,423.78	12/20/2023	60.92	57.93	22.58	3,362.86
									03/14/2024	61.90	59.91	20.60	3,361.88
TMW-20	12/6/2023	77.50	74.52	2	3,426.46	53.90 - 73.87	2.88	3,429.34	12/20/2023	65.26	62.38	12.24	3,364.08
									03/14/2024	65.21	62.33	12.91	3,364.13
TMW-21	12/7/2023	74.22	71.80	2	3,429.87	51.15 - 71.12	2.33	3,432.20	12/20/2023	67.31	64.98	6.91	3,364.89
									03/14/2024	67.29	64.96	6.84	3,364.91
TMW-22	12/7/2023	73.01	70.02	2	3,431.29	49.37 - 69.34	2.89	3,434.17	12/20/2023	68.86	65.97	4.15	3,365.31
									03/14/2024	68.85	65.96	4.06	3,365.22

Table 1
Monitoring Well Completion and Gauging Summary
Apache Corporation, EBDU 37
Incident ID: nDHR1922141227
Lea County, New Mexico

Well Information									Groundwater Data				
Well No.	Date Drilled	Well Depth (Feet TOC)	Drilled Depth (Feet BGS)	Well Diameter (inches)	Surface Elevation (Feet AMSL)	Screen Interval (Feet BGS)	Casing Stickup (Feet)	TOC Elevation (Feet AMSL)	Date Gauged	Depth to Water (feet TOC)	Depth to Water (feet BGS)	Water Column Height (feet)	Groundwater Elevation (feet AMSL)
TMW-23	12/13/2023	72.34	69.35	2	3,421.28	48.69 - 68.66	2.95	3,424.23	12/20/2023	61.51	58.56	10.83	3,362.72
									03/14/2024	61.39	58.44	10.91	3,372.84
TMW-24	12/13/2023	63.02	59.98	2	3,418.54	39.33 - 59.30	3.20	3,421.74	12/20/2023	59.41	56.21	3.61	3,362.33
									03/14/2024	59.28	56.08	3.90	3,362.46

Notes:
Monitoring wells installed by Scarborough Drilling Inc., Lamesa, Texas, with 2-inch schedule 40 PVC casing and screen.
bgs: below ground surface
TOC: top of casing
AMSL: above mean sea level

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, EBDU #37
Lea County, New Mexico

Sample	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)	Barium (mg/L)
WQCC Standard:		*0.005	*1	*0.7	*0.62	**250	**1,000	2.0
Windmill	¹ 08/01/2019	<0.001	<0.001	<0.001	<0.003	232	732	--
	² 09/23/2019	--	--	--	--	--	--	--
	² 12/26/2019	<0.000800	<0.00200	<0.00200	<0.00200	259	688	--
	³ 09/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	274	730	--
	³ 12/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	287	930	--
	³ 03/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	252	745	--
	³ 06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	255	781	--
	⁴ 10/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	251	800	--
	⁴ 12/22/2021	<0.00200	<0.00200	<0.00200	<0.00400	246	751	--
	⁴ 03/03/2022	<0.00200	<0.00200	<0.00200	<0.00400	256	828	--
	⁴ 05/23/2022	<0.00200	<0.00200	<0.00200	<0.00400	222	738	--
	⁴ 08/16/2022	<0.00200	<0.00200	<0.00200	<0.00400	256	1,190	--
	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	198	508	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	401	1,130	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	276	852	--
	⁴ 09/07/2023	<0.00200	<0.00200	<0.00400	<0.00400	350	981	--
	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	409	1,010	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	471	1,080	--
	04/03/2024	--	--	--	--	--	--	2.18
	05/02/2024	--	--	--	--	--	--	0.220
TMW-1	² 09/23/2019	<0.00800	<0.00200	<0.00200	<0.00200	37.4	400	--
	² 12/26/2019	<0.000800	<0.00200	<0.00200	<0.00200	21.1	390	--
	³ 09/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	22.6	390	--
	³ 12/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	13.1	383	--
	³ 03/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	10.9	360	--
	³ 06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	14.5	360	--
	³ 10/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	17.5	358	--
	⁴ 12/22/2021	<0.00200	<0.00200	<0.00200	<0.00400	10.3	391	--
	⁴ 03/01/2022	<0.00200	<0.00200	<0.00200	<0.00400	13.2	343	--
	⁴ 05/23/2022	<0.00200	<0.00200	<0.00200	<0.00400	26.0	369	--
	⁴ 08/16/2022	<0.00200	<0.00200	<0.00200	<0.00400	50.3	404	--
	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	21.4	216	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	41.9	358	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	275	845	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	277	830	--
	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	156	662	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00404	136	551	--
	05/02/2024	--	--	--	--	--	--	0.445
TMW-2	² 09/23/2019	<0.00800	<0.00200	<0.00200	<0.00200	338	1,220	--
	² 12/26/2019	<0.000800	<0.00200	<0.00200	<0.00200	307	1,170	--
	³ 09/30/2020	<0.00200	0.00227	<0.00200	<0.00200	314	1,040	--
	³ 12/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	298	1,050	--
	³ 03/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	293	1,000	--
	³ 06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	267	1,050	--
	⁴ 10/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	263	1,030	--
	⁴ 12/22/2021	<0.00200	<0.00200	<0.00200	<0.00400	284	1,270	--
	⁴ 03/01/2022	<0.00200	<0.00200	<0.00200	<0.00400	282	1,030	--

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, EBDU #37
Lea County, New Mexico

Sample	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)	Barium (mg/L)
WQCC Standard:		*0.005	*1	*0.7	*0.62	**250	**1,000	2.0
	⁴ 05/23/2022	<0.00200	<0.00200	<0.00400	<0.00400	256	1,070	--
	⁴ 08/16/2022	<0.00200	<0.00200	<0.00400	<0.00400	239	940	--
	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	195	985	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	211	1,060	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	248	1,120	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	270	1,050	--
	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	264	1,100	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	249	992	--
TMW-3	09/23/2019	--	--	--	--	--	--	--
	12/26/2019	--	--	--	--	--	--	--
	³ 09/30/2020	<0.00200	0.00322	<0.00200	0.00448	212	891	--
	³ 12/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	214	948	--
	³ 03/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	213	900	--
	³ 06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	180	934	--
	⁴ 10/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	192	967	--
	⁴ 12/22/2021	<0.00200	<0.00200	<0.00200	<0.00400	211	949	--
	⁴ 03/01/2022	<0.00200	<0.00200	<0.00200	<0.00400	233	944	--
	⁴ 05/23/2022	<0.00200	<0.00200	<0.00200	<0.00400	202	955	--
	⁴ 08/16/2022	<0.00200	<0.00200	<0.00200	<0.00200	245	1,100	--
	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	175	808	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	233	940	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	229	1,020	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	240	1,010	--
	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	242	1,020	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	234	959	0.0299
	05/02/2024	--	--	--	--	--	--	0.0299
TMW-4	09/23/2019	--	--	--	--	--	--	--
	12/26/2019	--	--	--	--	--	--	--
	³ 09/30/2020	<0.00200	0.00314	<0.00200	<0.00200	1,020	2,040	--
	³ 12/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	987	2,300	--
	³ 03/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	834	1,960	--
	³ 06/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	745	1,990	--
	⁴ 10/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	689	1,990	--
	⁴ 12/22/2021	<0.00200	<0.00200	<0.00200	<0.00400	735	2,180	--
	⁴ 03/01/2022	<0.00200	<0.00200	<0.00200	<0.00400	1,610	2,080	--
	⁴ 03/29/2022	<0.00200	<0.00200	<0.00200	0.00700	547	1,930	--
	⁴ 05/23/2022	<0.00200	<0.00200	<0.00200	<0.00400	522	1,930	--
	⁴ 08/16/2022	<0.00200	<0.00200	<0.00200	<0.00400	684	2,000	--
	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	486	1,940	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	703	1,850	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	673	1,900	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	625	1,810	--
	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	598	1,750	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	580	1,750	--
TMW-5	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	1,170	4,950	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	2,890	5,200	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	2,790	5,380	--

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, EBDU #37
Lea County, New Mexico

Sample	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)	Barium (mg/L)
WQCC Standard:		*0.005	*1	*0.7	*0.62	**250	**1,000	2.0
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	2,700	4,590	--
	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	2,320	4,250	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	2,980	5,360	--
TMW-6	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	941	3,160	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	2,270	3,200	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	1,550	3,260	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	1,630	2,820	--
	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	1,570	3,070	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	1,500	3,280	--
TMW-7	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	1,770	3,980	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	1,870	3,880	--
	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	1,770	3,720	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	1,740	3,690	--
TMW-8	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	974	2,410	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	1,130	2,470	--
	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00200	709	1,840	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	655	1,830	--
TMW-9	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	18.0	373	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	41.8	390	--
	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	37.3	404	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	29.3	373	--
TMW-10	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	9.89	525	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	67.0	514	--
	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	114.0	666	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	17.0	405	--
TMW-11	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	350	1,190	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	318	1,090	--
TMW-12	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	463	1,520	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	448	1,390	--
TMW-13	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	1,730	3,680	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	1,690	3,480	--
TMW-14	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	2,500	5,140	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	1,810	2,820	--
TMW-15	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	2,120	3,870	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	2,160	3,400	--
TMW-16	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	85.5	495	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	43.0	380	--

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, EBDU #37
Lea County, New Mexico

Sample	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)	Barium (mg/L)
WQCC Standard:		*0.005	*1	*0.7	*0.62	**250	**1,000	2.0
TMW-17	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	5,850	10,300	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	5,680	8,930	--
TMW-18	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	2,050	6,430	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	908	1,650	--
TMW-19	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	927	1,860	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	553	1,070	--
TMW-20	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	287	927	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	385	937	--
TMW-21	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	262	885	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	310	902	0.0471
	05/02/2024	--	--	--	--	--	--	
TMW-22	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	270	939	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	342	918	--
TMW-23	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	895	1,980	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	1,020	2,020	--
TMW-24	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	271	1,050	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	330	1,060	--
DUP-1 (Windmill)	³ 09/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	276	794	--
DUP-1 (Windmill)	³ 12/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	278	908	--
DUP-1 (Windmill)	³ 03/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	259	798	--
DUP-1 (Windmill)	³ 06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	256	781	--
DUP-1 (Windmill)	⁴ 10/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	250	830	--
DUP-1 (Windmill)	⁴ 12/22/2021	<0.00200	<0.00200	<0.00200	<0.00400	243	796	--
Dup-1 (TMW-2)	⁴ 03/01/2022	<0.00200	<0.00200	<0.00200	<0.00400	297	1,010	--
Dup-2 (Windmill)	⁴ 03/03/2022	<0.00200	<0.00200	<0.00200	<0.00400	491	787	--
Dup-1 (Windmill)	⁴ 05/23/2022	<0.00200	<0.00200	<0.00200	<0.00400	215	729	--
Dup-1 (Windmill)	⁴ 08/16/2022	<0.00200	<0.00200	<0.00200	<0.00400	283	1,120	--
Dup-1 (TMW-5)	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	1,410	4,520	--
Dup-1 (Windmill)	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	413	1,130	--
Dup-1 (Windmill)	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	273	855	--
Dup-1 (TMW-5)	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	3,030	5,850	--
Dup-1 (TMW-17)	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	5,830	10,300	--
Dup-2 (TMW-2)	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	265	1,010	--
Dup-1 (TMW-3)	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	328	986	--
Dup-2 (TMW-14)	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	1,330	2,530	--

Notes:

(1): analysis performed by Cardinal Laboratories, Hobbs, New Mexico, by EPA SW-846 Method 8021B (BTEX) and titration methods (chloride and TDS).

(2): analysis performed by DHL Analytical, Round Rock, Texas, by EPA SW-846 Method 8021B (BTEX) and Method 300 (chloride).

(3): analysis performed by Xenco Laboratories, Midland, Texas, by EPA SW-846 Method 8021B (BTEX) and Method 300 (chloride).

(4): analysis performed by Eurofins-Xenco, Midland, Texas, by EPA SW-846 Method 8021B (BTEX) and Method 300 (chloride).

<: concentration is less than analytical method reporting limit (RL).

*: NMWQCC Human Health Standard

**: NMWQCC Domestic Water Quality Standard

20.6.2.3101 NMAC

Laboratory Analytical Data Summary
Windmill, EBDU 37, Lea County, New Mexico

Page 1 of 2

20.6.2.3103 NMAC - Human Health Standards							
A.	Parameter	mg/L	4/3/2024	5/2/2024			
(a)	Antimony	0.006	<0.00400	--			
(b)	Arsenic	0.01	<0.00400	--			
(c)	Barium	2.0	2.18	*0.220			
(d)	Beryllium	0.004	<0.00200	--			
(e)	Cadmium	0.005	<0.00200	--			
(f)	Chromium	0.05	<0.00400	--			
(g)	Cyanide	0.2	<0.00500	--			
(h)	Fluoride	1.6	<1.00	--			
(i)	Lead	0.015	<0.00200	--			
(j)	Mercury (Total)	0.002	<0.000200	--			
(k)	Nitrate	10.0	2.78	--			
(l)	Nitrite	1.0	<0.100	--			
(m)	Selenium	0.05	<0.00200	--			
(n)	Silver	0.05	<0.00200	--			
(o)	Thallium	0.002	<0.00200	--			
(p)	Uranium	0.03	0.00315	--			
(q)	Radioactivity (combined R226 and R228)	5.0	0.945	--			
(r)	Benzene	0.005	<0.00100	--			
(s)	Polychlorinated biphenyls (PCB)	0.0005	<0.000262	--			
(t)	Toluene	1.0	<0.00100	--			
(u)	Carbon Tetrachloride	0.005	<0.00500	--			
(v)	1,2-dichloroethane (EDC)	0.005	<0.00100	--			
(w)	1,1-dichloroethylene	0.007	<0.00100	--			
(x)	Tetrachloroethylene (PCE)	0.005	<0.00100	--			
(y)	Trichloroethylene (TCE)	0.005	<0.00500	--			
(z)	Ethylbenzene	0.70	<0.00100	--			
(aa)	Xylenes (Total)	0.62	<0.0100	--			
(bb)	Methylene Chloride	0.005	<0.00500	--			
(cc)	Chloroform	0.1	<0.00100	--			
(dd)	1,1-Dichloroethane	0.025	<0.00100	--			
(ee)	Ethylene Dibromide (EDB)	0.00005	<0.00500	--			
(ff)	1,1,1-trichloroethane	0.20	<0.00100	--			
(gg)	1,1,2-trichloroethane	0.005	<0.00100	--			
(hh)	1,1,2,2-tetrachloroethane	0.01	<0.00100	--			
(ii)	vinyl chloride	0.002	<0.002	--			
(jj)	PAHs: total naphthalene plus monomethylnaphthalenes	0.03	<0.571	--			
(kk)	benzo-a-pyrene	0.0002	<0.571	--			
(ll)	cis-1,2-dichloroethene	0.07	<0.00100	--			
(mm)	trans-1,2-dichloroethene	0.1	<0.00100	--			
(nn)	1,2-dichloropropane (PDC)	0.005	<0.00500	--			
(oo)	Styrene	0.1	<0.00100	--			
(pp)	1,2-dichlorobenzene	0.60	<0.00100	--			
(qq)	1,4-dichlorobenzene	0.075	<0.00100	--			
(rr)	1,2,4-trichlorobenzene	0.07	<0.00500	--			
(ss)	pentachlorophenol	0.001	<1.14	--			
(tt)	atrazine	0.003	<0.500	--			

20.6.2.3101 NMAC

Laboratory Analytical Data Summary

Windmill, EBDU 37, Lea County, New Mexico

Page 2 of 2

20.6.2.3103 NMAC - Standards for Domestic Water Supply							
B.	Parameter	mg/L	4/3/2024				
(1)	Chloride	250.0	440	--			
(2)	Copper	1.0	0.00509	--			
(3)	Iron	1.0	<0.100	--			
(4)	Manganese	0.2	<0.00200	--			
(5)	Phenols	0.005	<0.0100	--			
(6)	Sulfate	600.0	56.5	--			
(7)	Total Dissolved Solids (TDS)	1,000.0	1,000	--			
(8)	Zinc	10.0	0.00465	--			
(9)	pH	6 - 9	7.3	--			
(10)	Methy tertiary-butyl ether (MTBE)	0.1	<0.00500	--			
20.6.2.3103 NMAC - Standards for Irrigation Use							
B.	Parameter	mg/L	4/3/2024	5/2/2024			
(1)	Aluminum	5.0	<0.0200	--			
(2)	Boron	0.75	0.154	--			
(3)	Cobalt	0.05	<0.00200	--			
(4)	Molybdenum	1.0	<0.00200	--			
(5)	Nickel	0.2	<0.00200	--			

Notes: Analysis performed by Eurofins Xenco Laboratories, Midland, Texas, by EPA SW-846 Methods.

All values reported in milligrams per liter (mg/L) equivalent to parts per million (ppm)

< Indicates analyte concentration is less than reporting limit (RL)

Bold indicates analyte concentration exceeds the reporting limit (RL) but below the regulatory limit**Bold and highlighted indicates analyte concentration exceeds RL and regulatory limit**

Figures

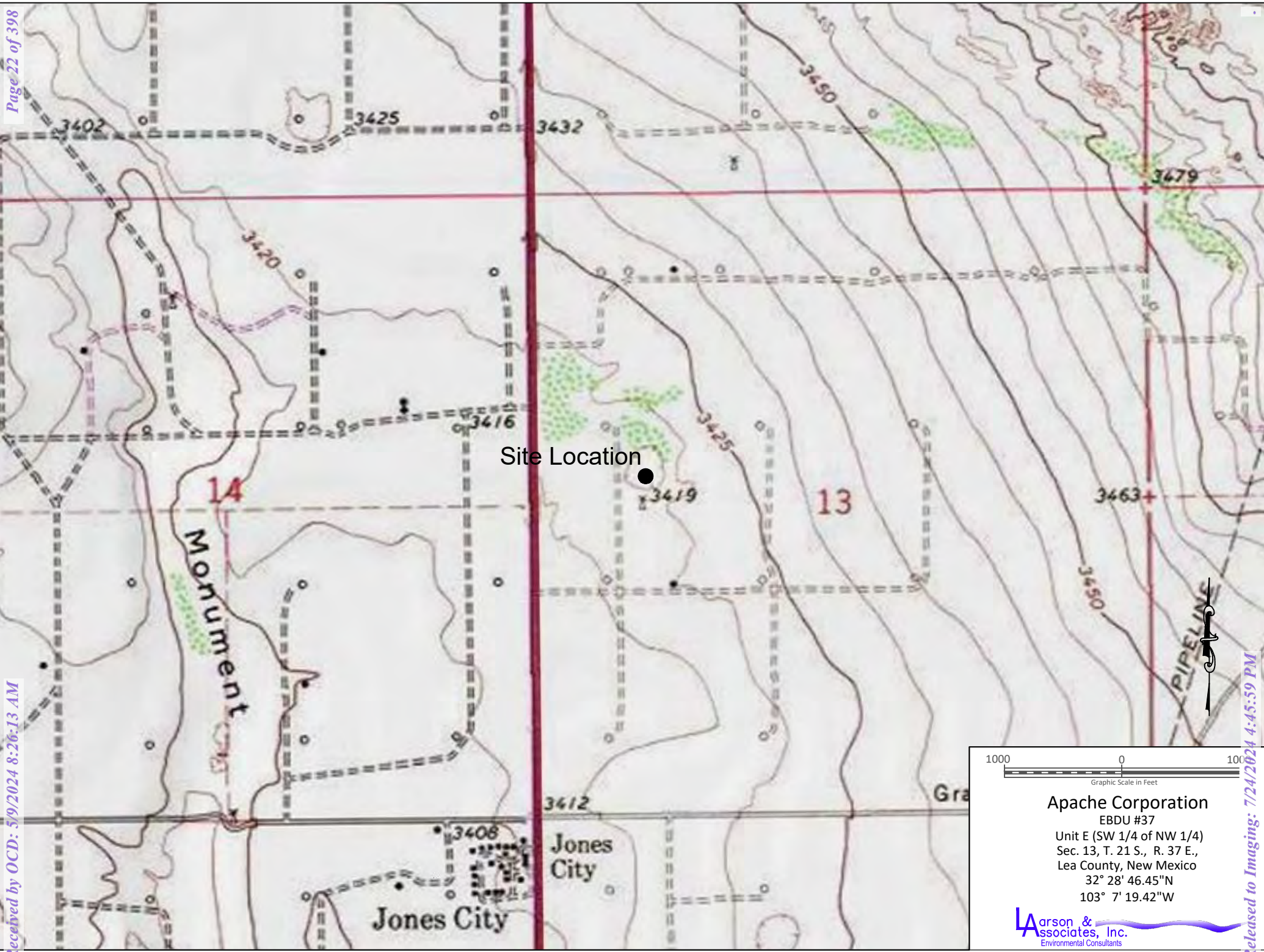
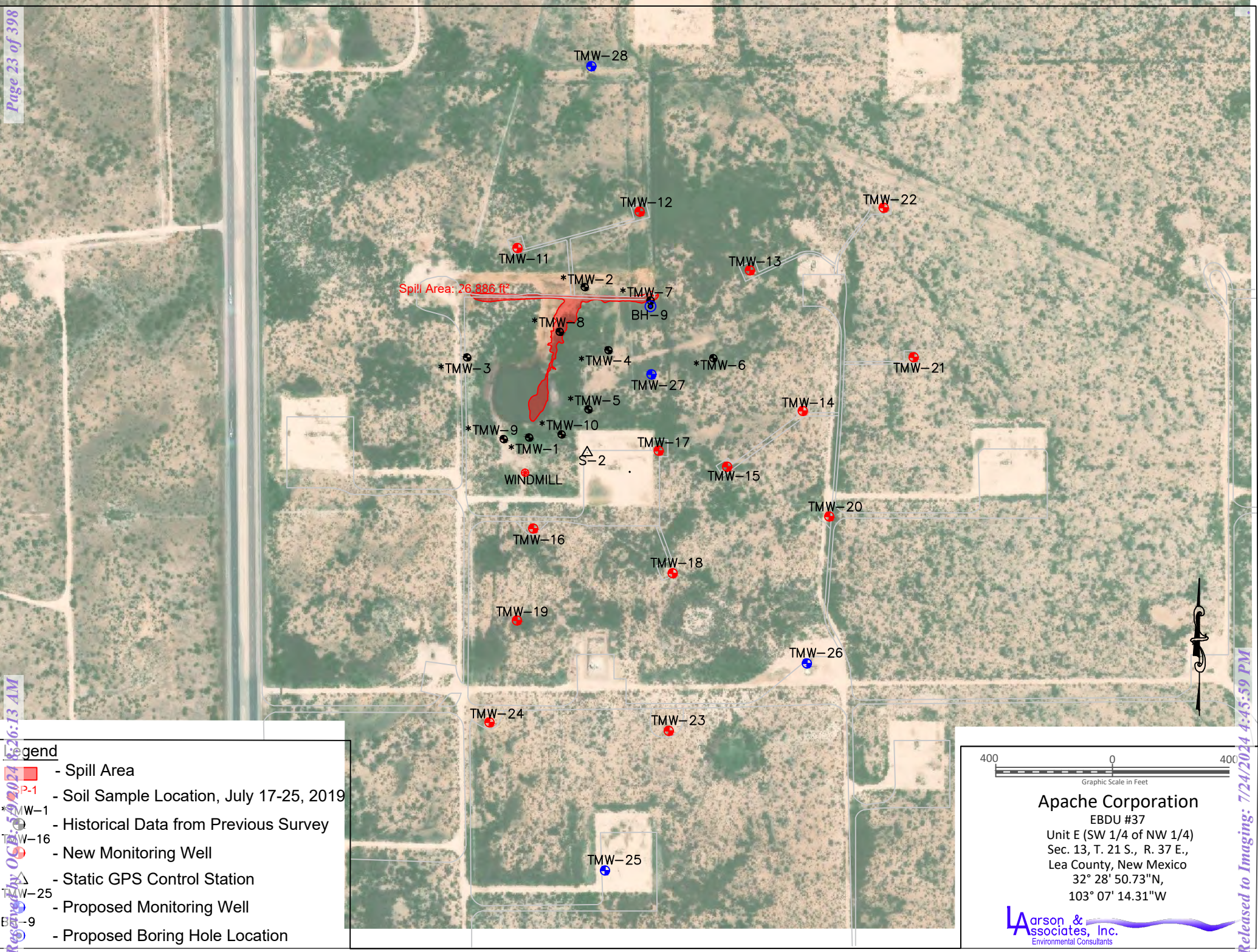


Figure 1 - Topographic Map



- Legend
- Spill Area
 - Soil Sample Location, July 17-25, 2019
 - *TMW-1 - Historical Data from Previous Survey
 - TMW-16 - New Monitoring Well
 - TMW-25 - Static GPS Control Station
 - TMW-25 - Proposed Monitoring Well
 - BH-9 - Proposed Boring Hole Location

400 0 400

Graphic Scale in Feet

Apache Corporation
EBDU #37
Unit E (SW 1/4 of NW 1/4)
Sec. 13, T. 21 S., R. 37 E.,
Lea County, New Mexico
32° 28' 50.73"N,
103° 07' 14.31"W

Larson & Associates, Inc.
Environmental Consultants

Figure 2 - Aerial Map Showing Monitoring Well Locations

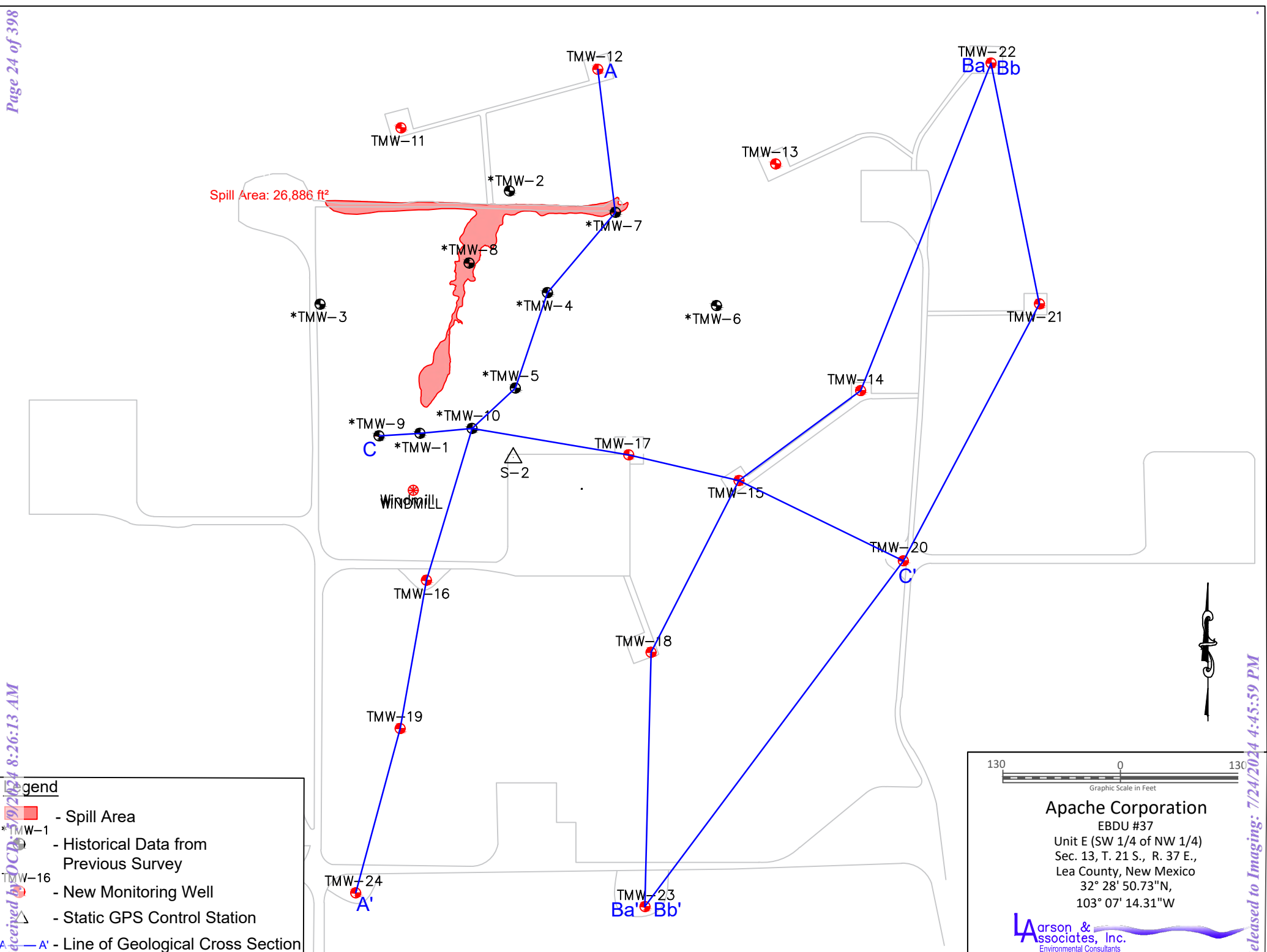
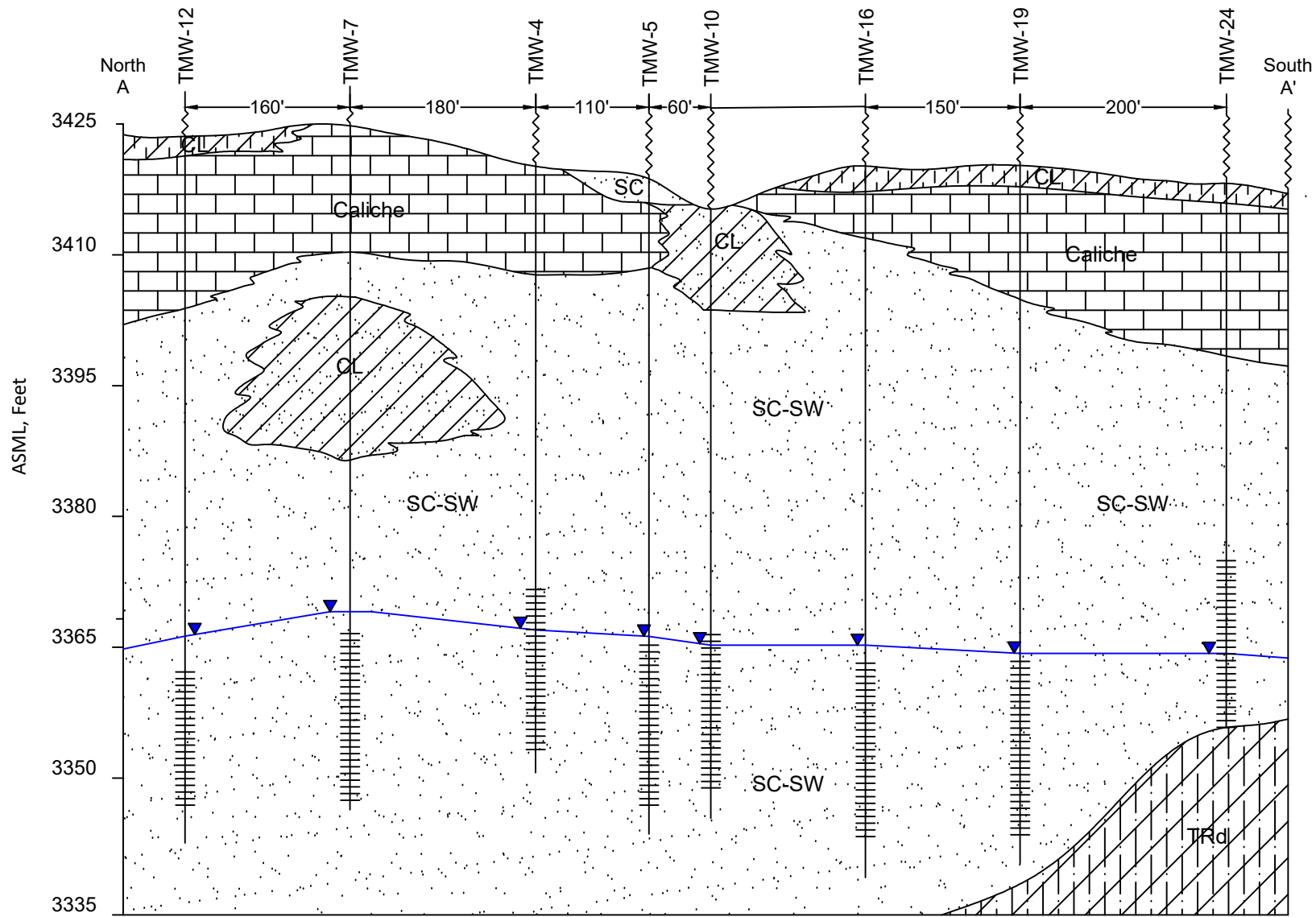


Figure 3 - Site Map and Lines of Geological Cross Sections



Legend

- Silty Clay/Top Soil (CL)
- Silty Clay (Triassic Chinle Fm.)
- Sand (SC-SW)
- Groundwater Potentiometric Surface, December 21, 2023
- Well Screen
- Caliche

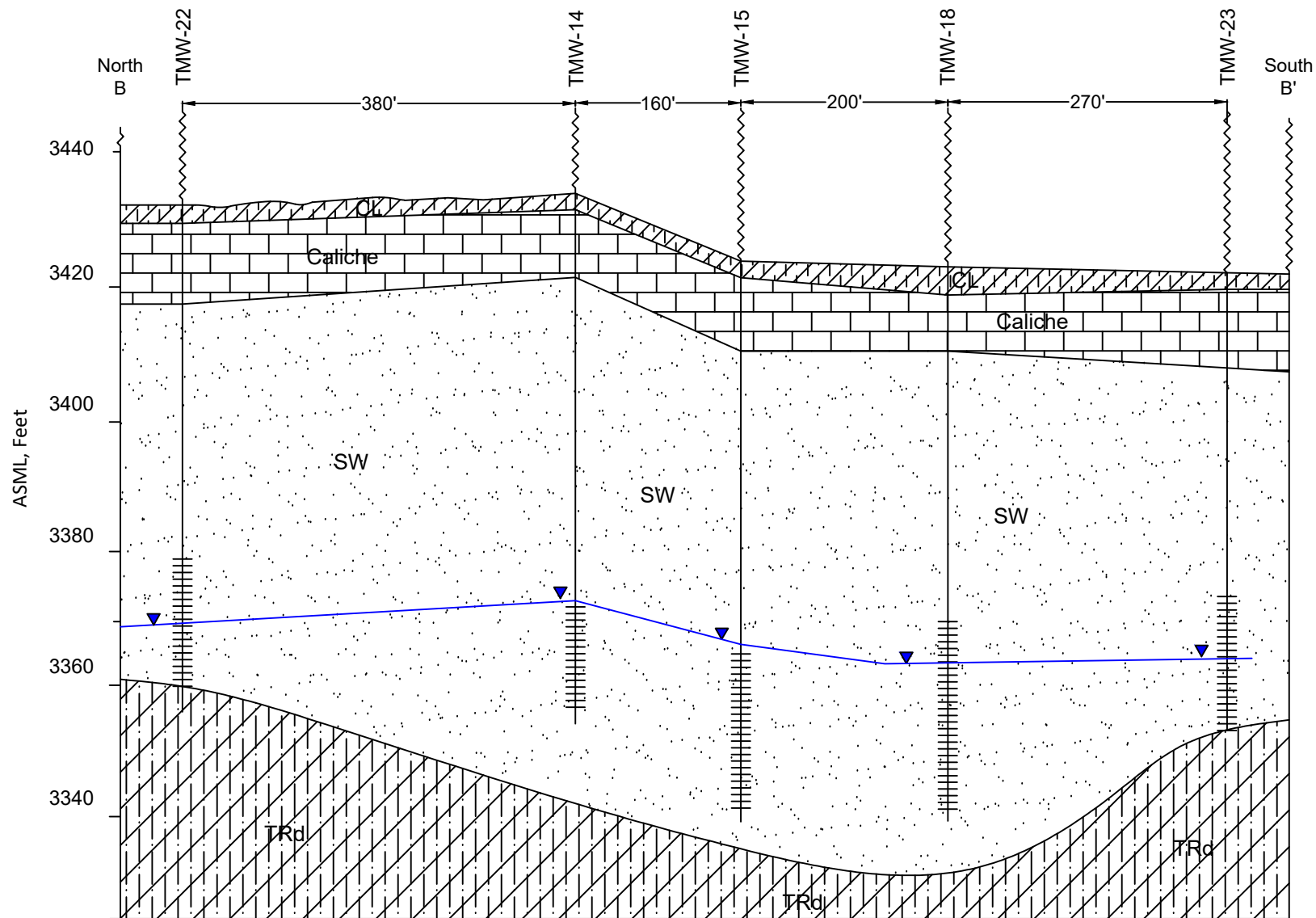
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 -Horizontal Scale: 1"=125'
 -Vertical Exaggeration: X5.33

Apache Corporation

EBDU #37
 Unit E (SW 1/4 of NW 1/4)
 Sec. 13, T. 21 S., R. 37 E.,
 Lea County, New Mexico
 32° 28' 50.73"N,
 103° 07' 14.31"W

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Figure 3a - Geological Cross Section A-A' (N-S)



Legend

-  - Silty Clay/Top Soil (CL)
-  - Caliche
-  - Groundwater Potentiometric Surface, December 21, 2023
-  - Sand (SW)
-  - Silty Clay (Triassic Chinle Fm.)
-  - Well Screen

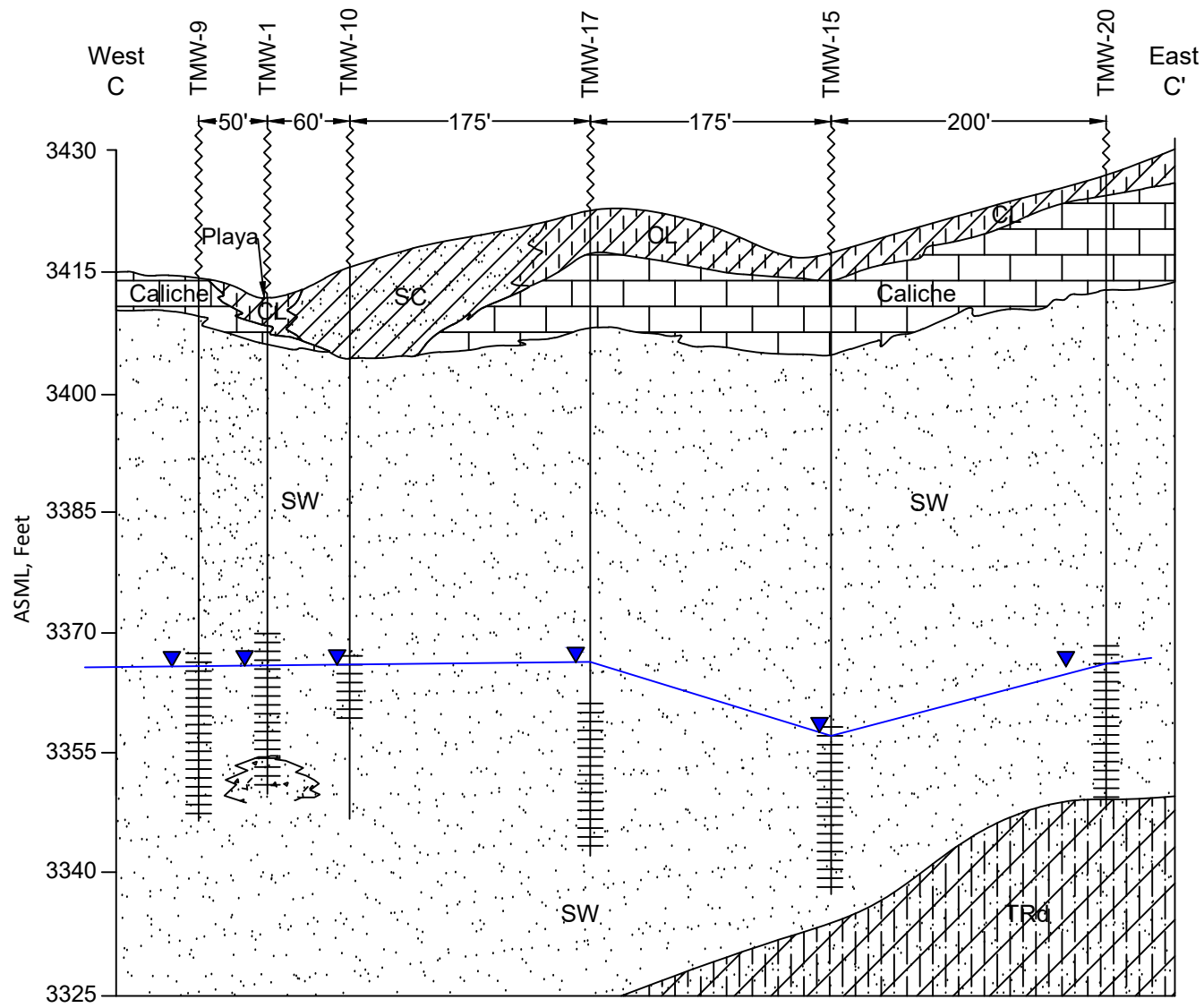
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Apache Corporation

EBDU #37
 Unit E (SW 1/4 of NW 1/4)
 Sec. 13, T. 21 S., R. 37 E.,
 Lea County, New Mexico
 32° 28' 50.73"N,
 103° 07' 14.31"W

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Figure 3b - Geological Cross Section Ba-Ba' (N-S)



Legend

- Silty Clay/Top Soil (CL)
- Sandy Clay (CL)
- Groundwater Potentiometric Surface, December 21, 2023
- Caliche
- Sand (SW)
- Silty Clay (Triassic Chinle Fm)
- Well Screen

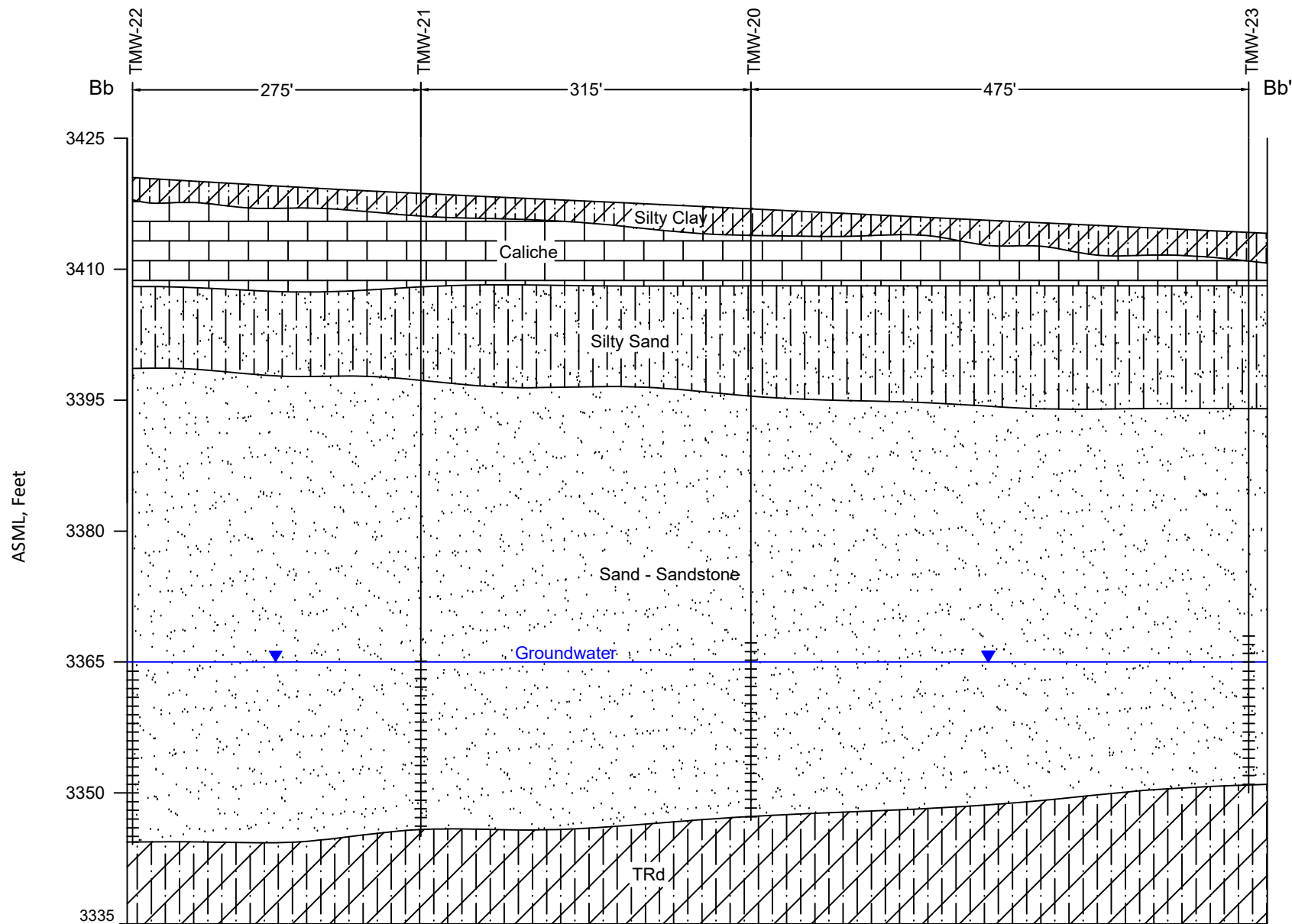
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 -Vertical Exaggeration: X5.3

Apache Corporation

EBDU #37
 Unit E (SW 1/4 of NW 1/4)
 Sec. 13, T. 21 S., R. 37 E.,
 Lea County, New Mexico
 32° 28' 50.73"N,
 103° 07' 14.31"W

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Figure 3c - Geological Cross Section C-C' (W-E)



Legend

- Silty Clay/Top Soil (CL)
- Caliche
- Silty Sand (SM)
- Sand (SW)
- Silty Clay (Triassic Chinle Fm)
- Groundwater Potentiometric Surface, December 21, 2023
- Well Screen

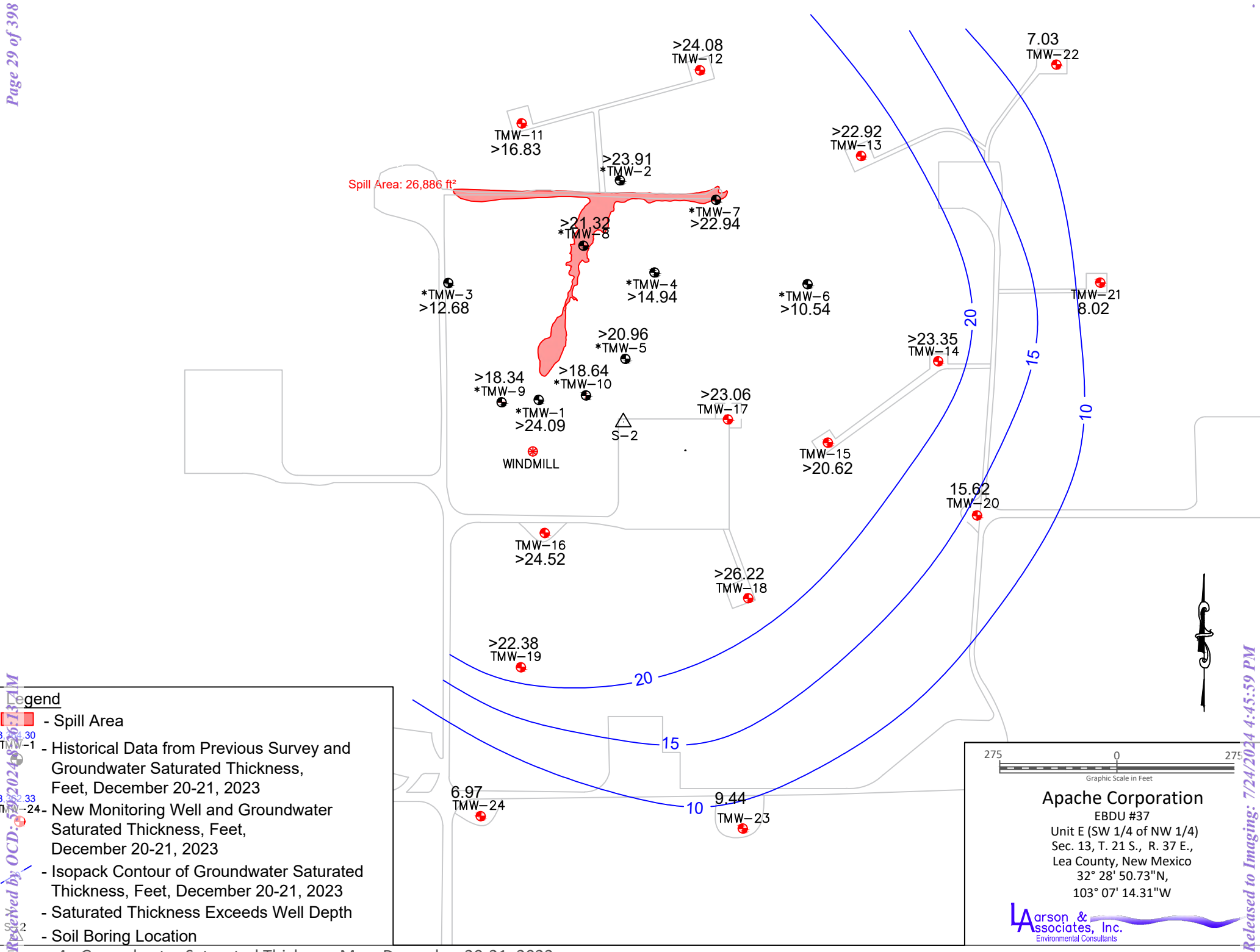
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 -Vertical Exaggeration: X5.3

Apache Corporation

EBDU #37
 Unit E (SW 1/4 of NW 1/4)
 Sec. 13, T. 21 S., R. 37 E.,
 Lea County, New Mexico
 32° 28' 50.73"N,
 103° 07' 14.31"W

Larson & Associates, Inc.
 Environmental Consultants

Figure 3d -Geological Cross Section Bb-Bb' (N-S)



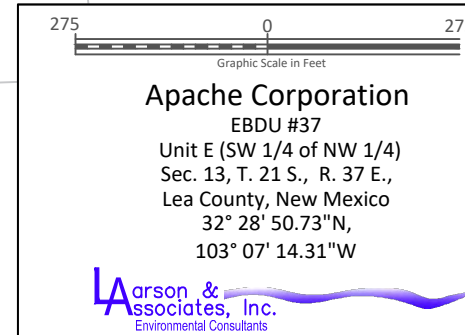
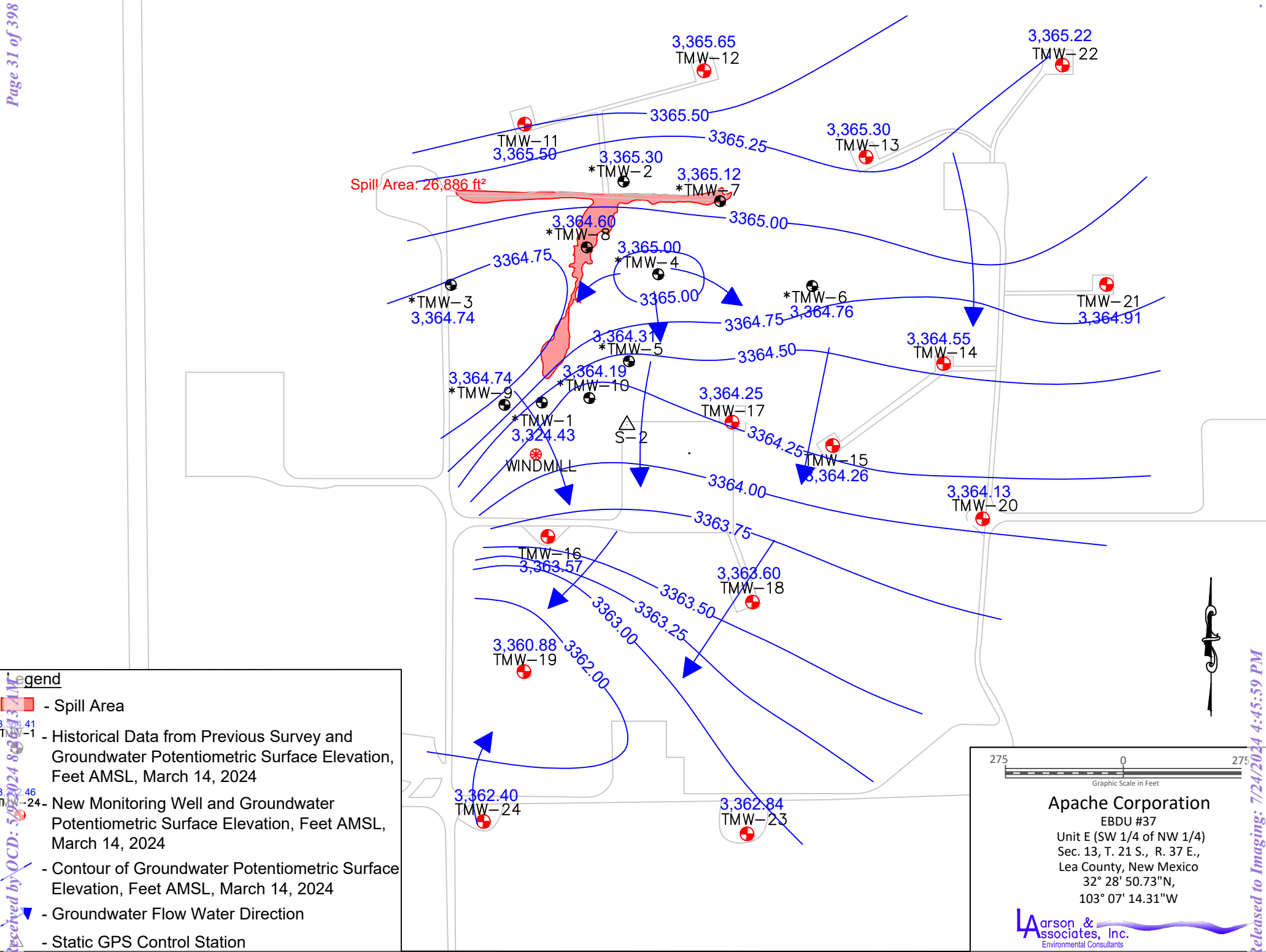


Figure 5a - Groundwater Potentiometric Surface Map, December 20-21, 2023

Figure 5b - Groundwater Potentiometric Surface Map, March 14, 2024



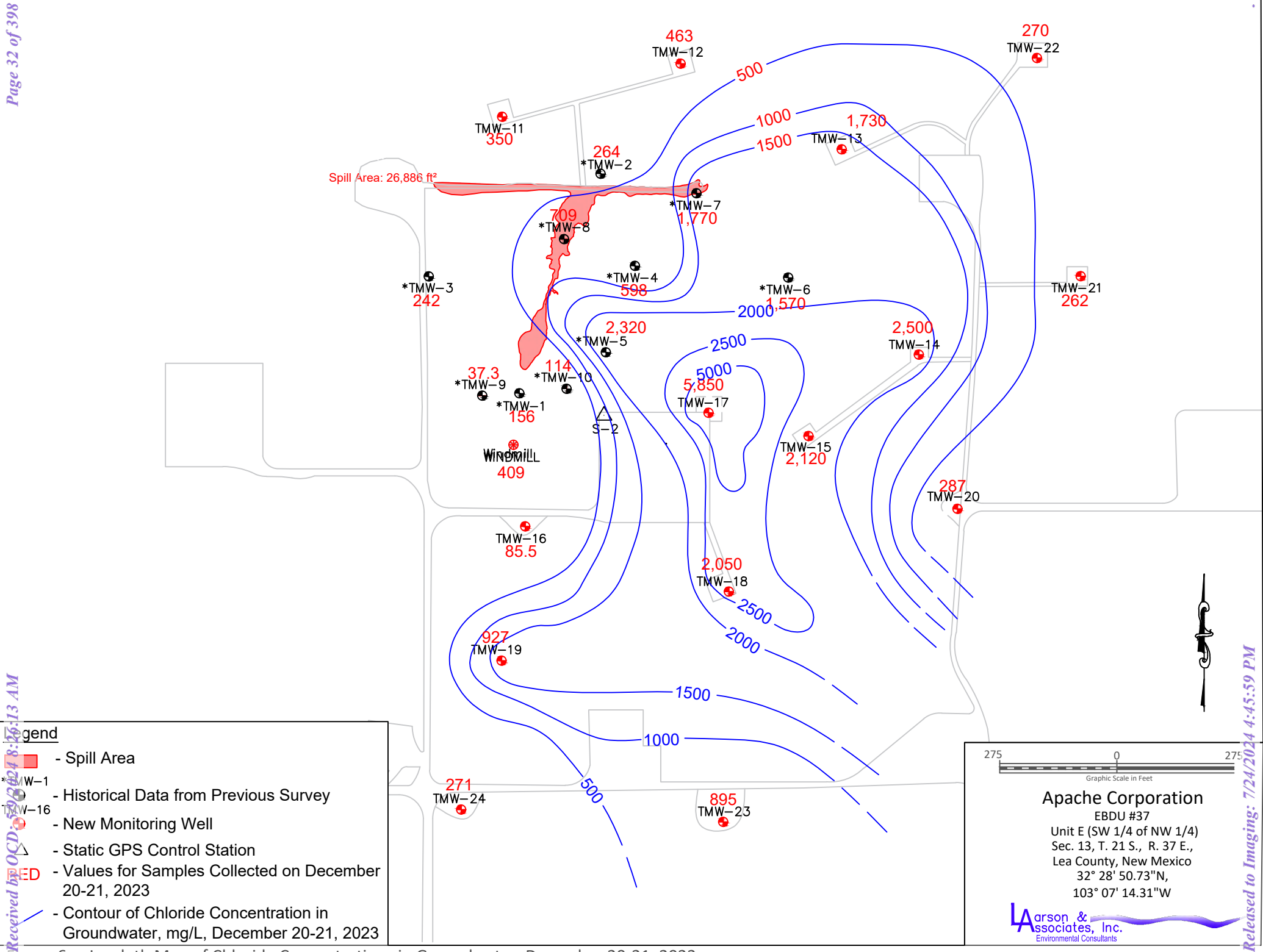


Figure 6a - Isopleth Map of Chloride Concentrations in Groundwater, December 20-21, 2023

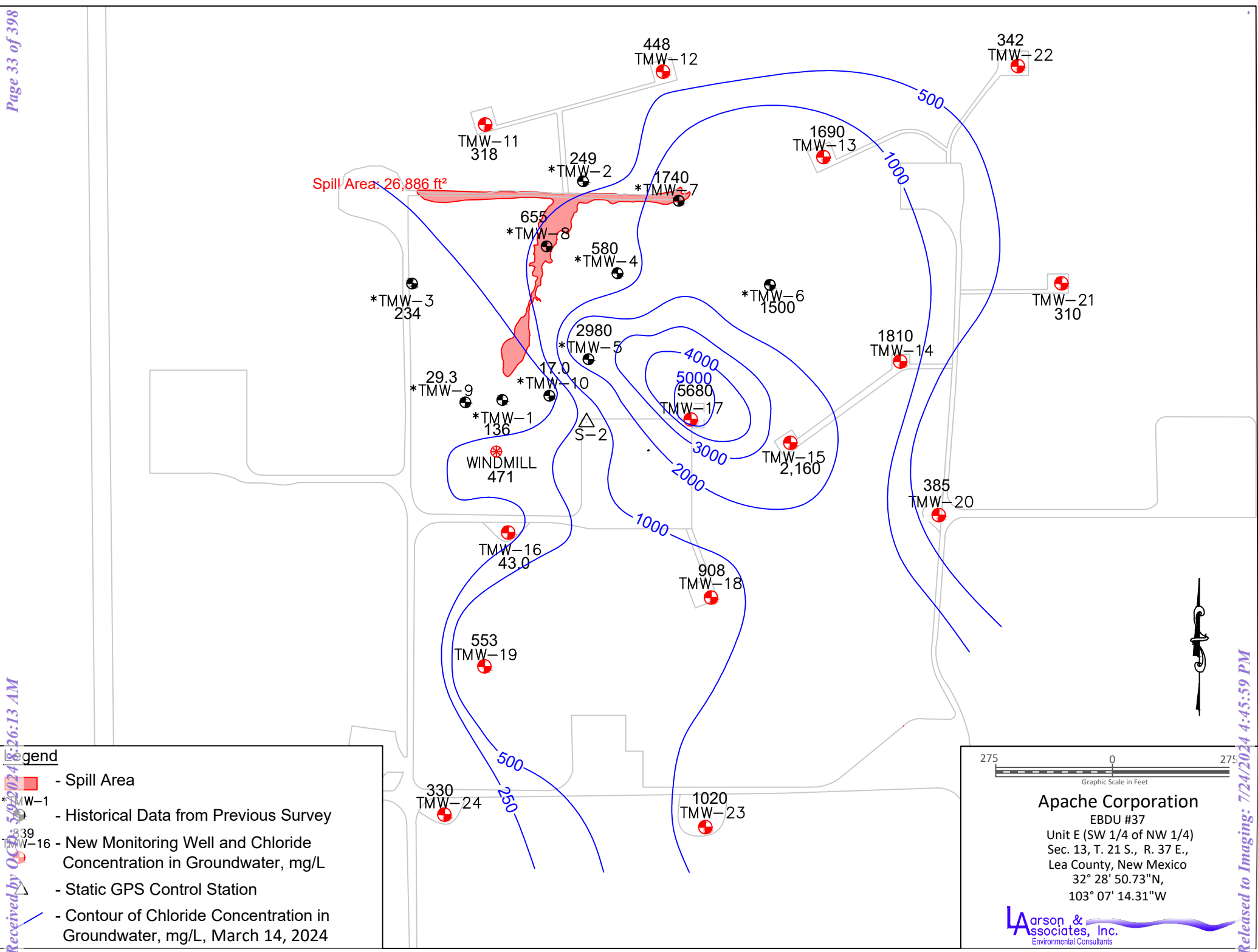


Figure 6b - Isopleth Map of Chloride Concentrations in Groundwater, March 14, 2024

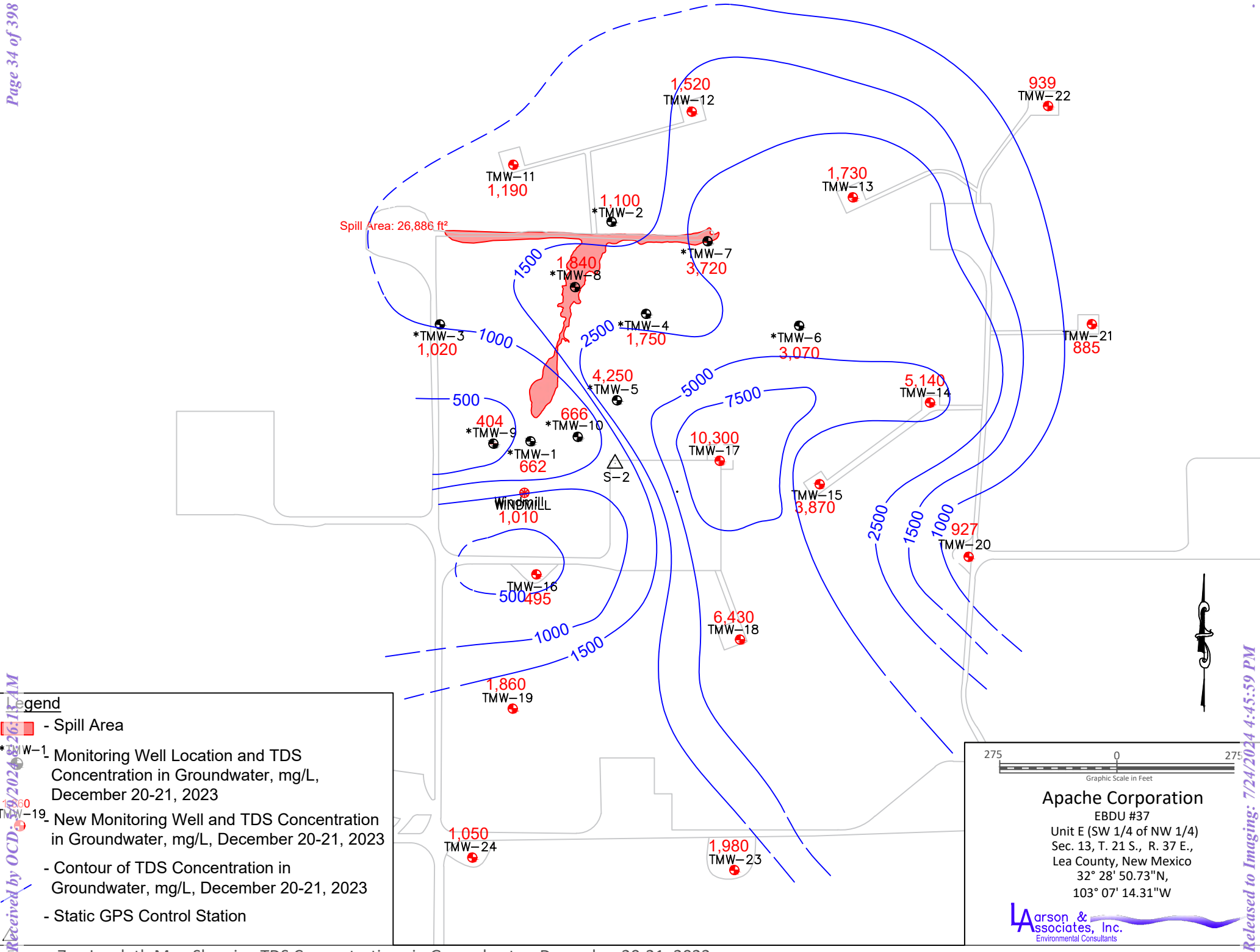


Figure 7a - Isopleth Map Showing TDS Concentrations in Groundwater, December 20-21, 2023

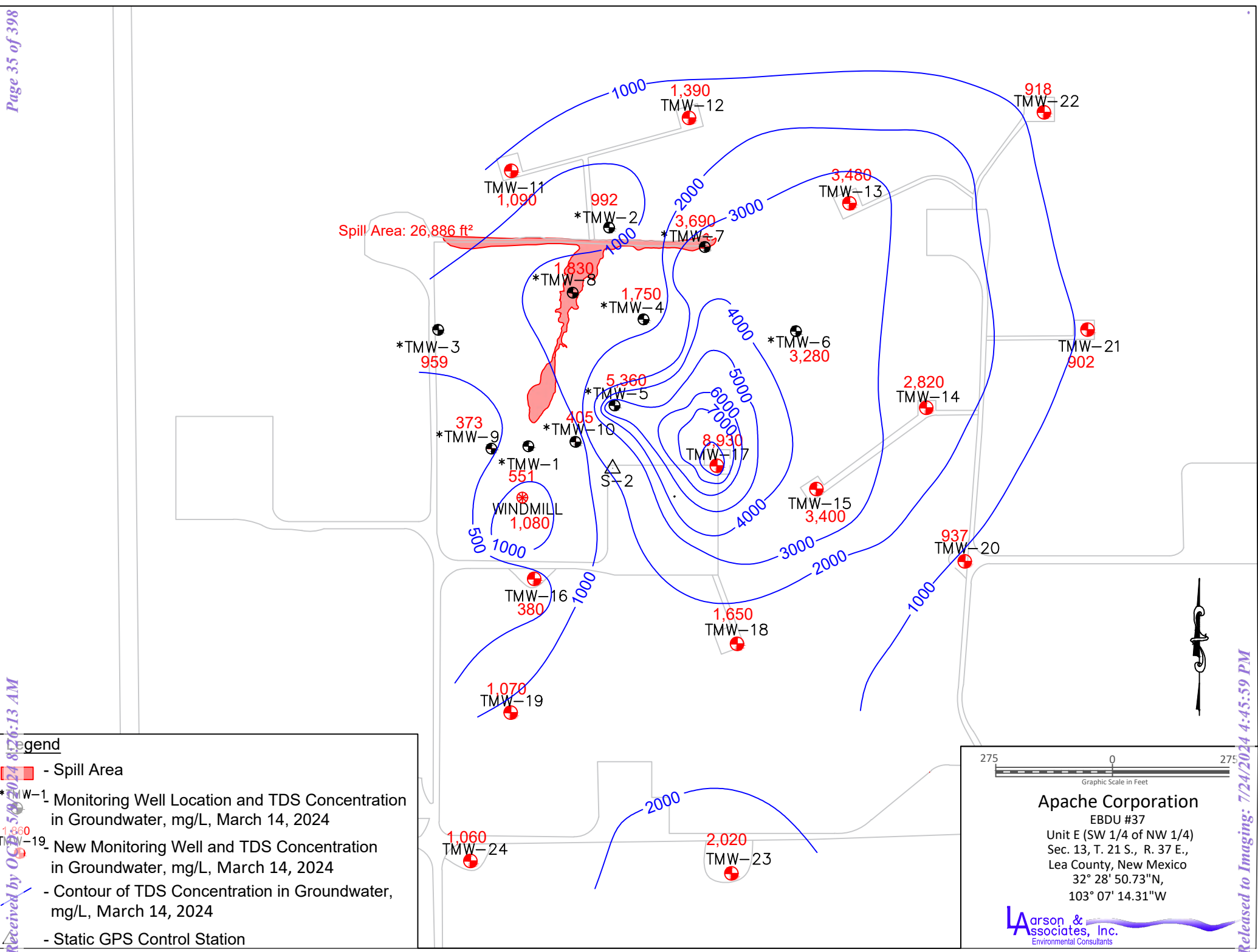


Figure 7b - Isopleth Map Showing TDS Concentrations in Groundwater, March 14, 2024

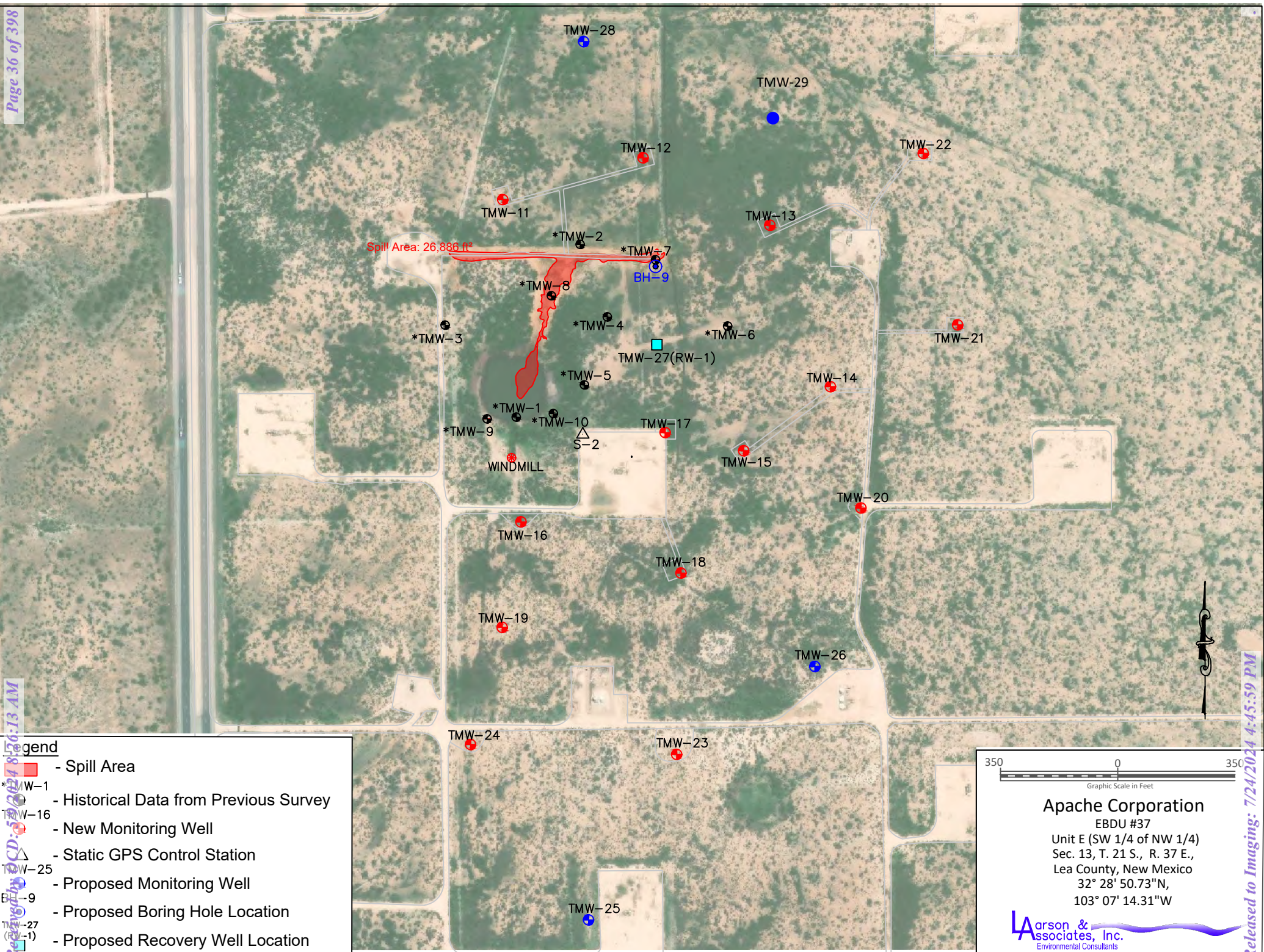


Figure 8a - Aerial Map Showing Monitoring Well Locations

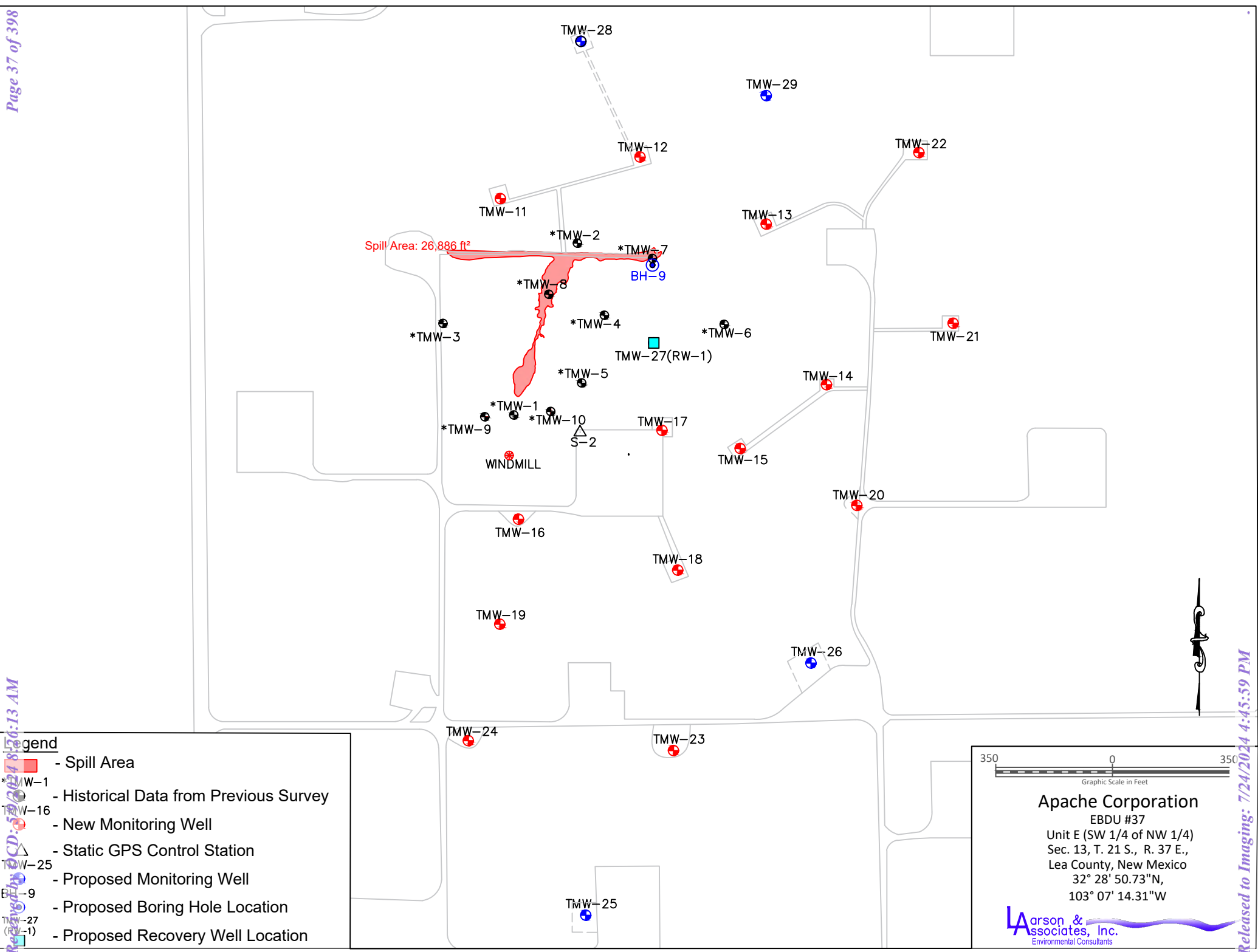


Figure 8b - Site Map Showing Monitoring Well Locations

**Attachment A
Initial C-141**

Incident ID	NDHR1922141227
District RP	1RP-5636
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	_____ 47 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☒ Yes ☐ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: Each of the following items must be included in the report.

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	NDHR1922141227
District RP	1RP-5636
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Bruce Baker Title: Sr. Environmental Tech

Signature: _____ Date: 10/29/2019

email: Larry.Baker@apachecorp.com Telephone: 432-631-6982

OCD Only

Received by: _____ Date: _____

Incident ID	NDHR1922141227
District RP	1RP-5636
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Bruce Baker Title: Sr. Environmental Tech
Signature: _____ Date: 10/29/2019
email: Larry.Baker@apachecorp.com Telephone: 432-631-6982

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Attachment B
NMOCD Communications

From: [Bratcher, Michael, EMNRD](#)
To: [Mark Larson](#); [Romero, Rosa, EMNRD](#); [Buchanan, Michael, EMNRD](#); [Powell, Brandon, EMNRD](#)
Cc: [Bole, Barrett](#); ["Larry.Baker@apachecorp.com"](mailto:Larry.Baker@apachecorp.com); [Robert Nelson](#)
Subject: RE: [EXTERNAL] FW: Apache Corporation, EBDU 37 (Incident NDHR1922141227/1RP-5636) - Scope of Work for Additional Monitoring Wells
Date: Tuesday, November 14, 2023 12:08:50 PM
Attachments: [image001.png](#)

Mark,

Your proposal (scope of work) dated November 8, 2023, for the installation of additional investigatory/monitor wells, is approved with one additional well installation requested. OCD requests in addition to those proposed, one more well be installed approximately half way between TMW-5 and the proposed TMW-15 well.

Thank you,

Mike Bratcher • Incident Supervisor
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave | Artesia, NM 88210
(575) 626-0857 | mike.bratcher@emnrd.nm.gov
<http://www.emnrd.nm.gov/ocd>



From: Mark Larson <Mark@laenvironmental.com>
Sent: Friday, November 10, 2023 8:20 AM
To: Romero, Rosa, EMNRD <RosaM.Romero@emnrd.nm.gov>; Buchanan, Michael, EMNRD <Michael.Buchanan@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Cc: Bole, Barrett <Barrett.Bole@apachecorp.com>; 'Larry.Baker@apachecorp.com' <Larry.Baker@apachecorp.com>; Robert Nelson <rnelson@laenvironmental.com>
Subject: [EXTERNAL] FW: Apache Corporation, EBDU 37 (Incident NDHR1922141227/1RP-5636) - Scope of Work for Additional Monitoring Wells

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Ms. Rosa M. Romero, Mr. Michael Buchanan, Mr. Mike Bratcher,
Per the meeting on October 30, 2023, Larson & Associates,, Inc. (LAI), on behalf of Apache Corporation (Apache), submits the attached scope of work (SOW) for installing additional monitoring wells (TMW-11 through TMW-16) at the East Blinebry Drinkard Unit (EBDU) #37 (Site) located in Unit E (SW/NW), Section 13, Township 21 South, Range 37 East, Lea County, New Mexico. Please contact Barrett Bole with Apache at (432) 818-1108 or email Barrett.Bole@apachecorp.com, Bruce Baker with Apache at (432) 631-6982 or email Larry.Baker@apachecorp.com, Robert Nelson at (432) 687-0901 or rnelson@laenvironmental.com or me to discuss any questions you may have.

Respectfully,
Mark J. Larson, P.G.
President/Sr. Hydrogeologist
507 N. Marienfeld St., Suite 202
Midland, Texas 79701
Office – 432-687-0901
Cell – 432- 556-8656
Fax – 432-687-0456
mark@laenvironmental.com



“Serving the Permian Basin Since 2000”

Attachment C

**Laboratory Report
(Chloride Analysis)**



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 12/4/2023 9:53:16 AM

JOB DESCRIPTION

EBDU #37
19-0112-49

JOB NUMBER

880-36346-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Holly Taylor

Generated
12/4/2023 9:53:16 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Laboratory Job ID: 880-36346-1
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Job ID: 880-36346-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-36346-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 12/1/2023 9:14 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.3°C

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 880-68117 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Client Sample ID: TMW-11

Lab Sample ID: 880-36346-1

Date Collected: 11/30/23 09:23

Matrix: Water

Date Received: 12/01/23 09:14

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	360		5.00	mg/L			12/01/23 17:35	10

Client Sample ID: TMW-12

Lab Sample ID: 880-36346-2

Date Collected: 11/30/23 12:16

Matrix: Water

Date Received: 12/01/23 09:14

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	437	F1 F2	5.00	mg/L			12/01/23 12:45	10

Client Sample ID: Tote

Lab Sample ID: 880-36346-3

Date Collected: 11/30/23 08:15

Matrix: Water

Date Received: 12/01/23 09:14

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	948		50.0	mg/L			12/01/23 13:25	100

Client Sample ID: Tote

Lab Sample ID: 880-36346-4

Date Collected: 11/30/23 11:30

Matrix: Water

Date Received: 12/01/23 09:14

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.7		2.50	mg/L			12/01/23 17:27	5

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-68106/3

Matrix: Water

Analysis Batch: 68106

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			12/01/23 14:18	1

Lab Sample ID: LCS 880-68106/4

Matrix: Water

Analysis Batch: 68106

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	25.37		mg/L		101	90 - 110

Lab Sample ID: LCSD 880-68106/5

Matrix: Water

Analysis Batch: 68106

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.79		mg/L		103	90 - 110	2	20

Lab Sample ID: MB 880-68112/3

Matrix: Water

Analysis Batch: 68112

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			12/01/23 16:52	1

Lab Sample ID: LCS 880-68112/4

Matrix: Water

Analysis Batch: 68112

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	25.51		mg/L		102	90 - 110

Lab Sample ID: LCSD 880-68112/5

Matrix: Water

Analysis Batch: 68112

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.61		mg/L		102	90 - 110	0	20

Lab Sample ID: 880-36346-4 MS

Matrix: Water

Analysis Batch: 68112

Client Sample ID: Tote

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	11.7		125	134.7		mg/L		98	90 - 110

Lab Sample ID: 880-36346-4 MSD

Matrix: Water

Analysis Batch: 68112

Client Sample ID: Tote

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	11.7		125	135.3		mg/L		99	90 - 110	0	20

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-68117/3 Matrix: Water Analysis Batch: 68117										Client Sample ID: Method Blank Prep Type: Total/NA			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac					
Chloride	<0.500	U	0.500	mg/L			12/01/23 12:04	1					

Lab Sample ID: LCS 880-68117/4 Matrix: Water Analysis Batch: 68117										Client Sample ID: Lab Control Sample Prep Type: Total/NA			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits				
Chloride			25.0	25.61		mg/L		102	90 - 110				

Lab Sample ID: LCSD 880-68117/5 Matrix: Water Analysis Batch: 68117										Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA			
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit		
Chloride			25.0	25.68		mg/L		103	90 - 110	0	20		

Lab Sample ID: 880-36346-2 MS Matrix: Water Analysis Batch: 68117										Client Sample ID: TMW-12 Prep Type: Total/NA			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits				
Chloride	437	F1 F2	250	528.4	F1	mg/L		37	90 - 110				

Lab Sample ID: 880-36346-2 MSD Matrix: Water Analysis Batch: 68117										Client Sample ID: TMW-12 Prep Type: Total/NA			
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit		
Chloride	437	F1 F2	250	725.0	F1 F2	mg/L		115	90 - 110	31	20		

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

HPLC/IC

Analysis Batch: 68106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36346-1	TMW-11	Total/NA	Water	300.0	
MB 880-68106/3	Method Blank	Total/NA	Water	300.0	
LCS 880-68106/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-68106/5	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 68112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36346-4	Tote	Total/NA	Water	300.0	
MB 880-68112/3	Method Blank	Total/NA	Water	300.0	
LCS 880-68112/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-68112/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-36346-4 MS	Tote	Total/NA	Water	300.0	
880-36346-4 MSD	Tote	Total/NA	Water	300.0	

Analysis Batch: 68117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36346-2	TMW-12	Total/NA	Water	300.0	
880-36346-3	Tote	Total/NA	Water	300.0	
MB 880-68117/3	Method Blank	Total/NA	Water	300.0	
LCS 880-68117/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-68117/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-36346-2 MS	TMW-12	Total/NA	Water	300.0	
880-36346-2 MSD	TMW-12	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Client Sample ID: TMW-11
Date Collected: 11/30/23 09:23
Date Received: 12/01/23 09:14

Lab Sample ID: 880-36346-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	10 mL	10 mL	68106	12/01/23 17:35	CH	EET MID

Client Sample ID: TMW-12
Date Collected: 11/30/23 12:16
Date Received: 12/01/23 09:14

Lab Sample ID: 880-36346-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	10 mL	10 mL	68117	12/01/23 12:45	CH	EET MID

Client Sample ID: Tote
Date Collected: 11/30/23 08:15
Date Received: 12/01/23 09:14

Lab Sample ID: 880-36346-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100	10 mL	10 mL	68117	12/01/23 13:25	CH	EET MID

Client Sample ID: Tote
Date Collected: 11/30/23 11:30
Date Received: 12/01/23 09:14

Lab Sample ID: 880-36346-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	10 mL	10 mL	68112	12/01/23 17:27	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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Method Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET MID

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-36346-1	TMW-11	Water	11/30/23 09:23	12/01/23 09:14
880-36346-2	TMW-12	Water	11/30/23 12:16	12/01/23 09:14
880-36346-3	Tote	Water	11/30/23 08:15	12/01/23 09:14
880-36346-4	Tote	Water	11/30/23 11:30	12/01/23 09:14

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36346 No. 3173
CHAIN-OF-CUSTODY

Arson & Associates, Inc. Environmental Consultants Data Reported to <u>Robert Nelson</u>		507 N. Marienfeld, Ste. 202 Midland, TX 79701 432-687-0901		DATE <u>12/1/2023</u> PAGE <u>1</u> OF <u>1</u> PO# _____ PROJECT LOCATION OR NAME <u>EDDA #37</u> LAI PROJECT # <u>19-0112-49</u> COLLECTOR <u>Ant BB</u>
TRRP report? ☐ Yes ☒ No	S=SOIL W=WATER A=AIR	P=PAINT SL=SLUDGE OT=OTHER	PRESERVATION HCl ☐ H ₂ SO ₄ ☐ NaOH ☐ ICE ☐ UNPRESERVED ☐	ANALYSES TPH 418 ☐ MTBE ☐ GASOLINE MOD 8015 ☐ TPH 1005 ☐ TPH 1006 ☐ DIESEL MOD 8015 ☐ VOC MOD 8015 ☐ VOC 8260 ☐ SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ 8081 PESTICIDES ☐ 8082 PCBs ☐ TCDF-METALS (RCRA) ☐ 8151 HERBICIDES ☐ TCDF-METALS (RCRA) ☐ TCDF-VOC ☐ TCDF-PEST ☐ HERB ☐ TCDF-VOC ☐ LEAD - TOTAL (RCRA) ☐ P W 200.8 ☐ OTHER LIST ☐ RCL ☐ TOX ☐ FLASHPOINT ☐ pH ☐ HEXAVALENT CHROMIUM ☐ JDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ CHLORIDES ☐ AMMONIUM ☐ ALKALINITY ☐
TIME ZONE <u>MST/ NM</u>	Lab # _____ Date _____ Time _____ Matrix _____	# of Containers _____	FIELD NOTES <u>Direct bill to Apache</u>	
Field Sample ID <u>Tmw-11</u>	<u>11/30/23</u> <u>9:23</u> <u>W</u>	<u>1</u>	<u>X</u>	
<u>Tmw-12</u>	<u>12/1/23</u> <u>6:15</u> <u>W</u>	<u>1</u>	<u>1</u>	
<u>Tote</u>	<u>11:30</u> <u>OT</u>	<u>1</u>		
<u>Tote</u>				
TOTAL <u>4</u>				


 880-36346 Chain of Custody

RELINQUISHED BY (Signature) <u>Robert Nelson</u>	DATE/TIME <u>12/1/23</u>	RECEIVED BY (Signature) <u>[Signature]</u>
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
LABORATORY <u>Xena</u>		

LABORATORY USE ONLY:
 RECEIVING TEMP 4.1/4.3
 CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
 THERM# TRE 1-0
 CARRIER BILL # _____

TURN AROUND TIME
 NORMAL ☐ 1 DAY ☒ Rush!!
 2 DAY ☐ OTHER ☐

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Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-36346-1
SDG Number: 19-0112-49

Login Number: 36346
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 12/4/2023 9:53:16 AM

JOB DESCRIPTION

EBDU #37
19-0112-49

JOB NUMBER

880-36346-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Holly Taylor

Generated
12/4/2023 9:53:16 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Laboratory Job ID: 880-36346-1
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Job ID: 880-36346-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-36346-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 12/1/2023 9:14 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.3°C

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 880-68117 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Client Sample ID: TMW-11
Date Collected: 11/30/23 09:23
Date Received: 12/01/23 09:14

Lab Sample ID: 880-36346-1
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	360		5.00	mg/L			12/01/23 17:35	10

Client Sample ID: TMW-12
Date Collected: 11/30/23 12:16
Date Received: 12/01/23 09:14

Lab Sample ID: 880-36346-2
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	437	F1 F2	5.00	mg/L			12/01/23 12:45	10

Client Sample ID: Tote
Date Collected: 11/30/23 08:15
Date Received: 12/01/23 09:14

Lab Sample ID: 880-36346-3
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	948		50.0	mg/L			12/01/23 13:25	100

Client Sample ID: Tote
Date Collected: 11/30/23 11:30
Date Received: 12/01/23 09:14

Lab Sample ID: 880-36346-4
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.7		2.50	mg/L			12/01/23 17:27	5

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-68106/3

Matrix: Water

Analysis Batch: 68106

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			12/01/23 14:18	1

Lab Sample ID: LCS 880-68106/4

Matrix: Water

Analysis Batch: 68106

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	25.37		mg/L		101	90 - 110

Lab Sample ID: LCSD 880-68106/5

Matrix: Water

Analysis Batch: 68106

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.79		mg/L		103	90 - 110	2	20

Lab Sample ID: MB 880-68112/3

Matrix: Water

Analysis Batch: 68112

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			12/01/23 16:52	1

Lab Sample ID: LCS 880-68112/4

Matrix: Water

Analysis Batch: 68112

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	25.51		mg/L		102	90 - 110

Lab Sample ID: LCSD 880-68112/5

Matrix: Water

Analysis Batch: 68112

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.61		mg/L		102	90 - 110	0	20

Lab Sample ID: 880-36346-4 MS

Matrix: Water

Analysis Batch: 68112

Client Sample ID: Tote

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	11.7		125	134.7		mg/L		98	90 - 110

Lab Sample ID: 880-36346-4 MSD

Matrix: Water

Analysis Batch: 68112

Client Sample ID: Tote

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	11.7		125	135.3		mg/L		99	90 - 110	0	20

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-68117/3 Matrix: Water Analysis Batch: 68117										Client Sample ID: Method Blank Prep Type: Total/NA			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac					
Chloride	<0.500	U	0.500	mg/L			12/01/23 12:04	1					

Lab Sample ID: LCS 880-68117/4 Matrix: Water Analysis Batch: 68117										Client Sample ID: Lab Control Sample Prep Type: Total/NA			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits				
Chloride			25.0	25.61		mg/L		102	90 - 110				

Lab Sample ID: LCSD 880-68117/5 Matrix: Water Analysis Batch: 68117										Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA			
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit		
Chloride			25.0	25.68		mg/L		103	90 - 110	0	20		

Lab Sample ID: 880-36346-2 MS Matrix: Water Analysis Batch: 68117										Client Sample ID: TMW-12 Prep Type: Total/NA			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits				
Chloride	437	F1 F2	250	528.4	F1	mg/L		37	90 - 110				

Lab Sample ID: 880-36346-2 MSD Matrix: Water Analysis Batch: 68117										Client Sample ID: TMW-12 Prep Type: Total/NA			
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit		
Chloride	437	F1 F2	250	725.0	F1 F2	mg/L		115	90 - 110	31	20		

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

HPLC/IC

Analysis Batch: 68106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36346-1	TMW-11	Total/NA	Water	300.0	
MB 880-68106/3	Method Blank	Total/NA	Water	300.0	
LCS 880-68106/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-68106/5	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 68112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36346-4	Tote	Total/NA	Water	300.0	
MB 880-68112/3	Method Blank	Total/NA	Water	300.0	
LCS 880-68112/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-68112/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-36346-4 MS	Tote	Total/NA	Water	300.0	
880-36346-4 MSD	Tote	Total/NA	Water	300.0	

Analysis Batch: 68117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36346-2	TMW-12	Total/NA	Water	300.0	
880-36346-3	Tote	Total/NA	Water	300.0	
MB 880-68117/3	Method Blank	Total/NA	Water	300.0	
LCS 880-68117/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-68117/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-36346-2 MS	TMW-12	Total/NA	Water	300.0	
880-36346-2 MSD	TMW-12	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Client Sample ID: TMW-11
Date Collected: 11/30/23 09:23
Date Received: 12/01/23 09:14

Lab Sample ID: 880-36346-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	10 mL	10 mL	68106	12/01/23 17:35	CH	EET MID

Client Sample ID: TMW-12
Date Collected: 11/30/23 12:16
Date Received: 12/01/23 09:14

Lab Sample ID: 880-36346-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	10 mL	10 mL	68117	12/01/23 12:45	CH	EET MID

Client Sample ID: Tote
Date Collected: 11/30/23 08:15
Date Received: 12/01/23 09:14

Lab Sample ID: 880-36346-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100	10 mL	10 mL	68117	12/01/23 13:25	CH	EET MID

Client Sample ID: Tote
Date Collected: 11/30/23 11:30
Date Received: 12/01/23 09:14

Lab Sample ID: 880-36346-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	10 mL	10 mL	68112	12/01/23 17:27	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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Method Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET MID

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36346-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-36346-1	TMW-11	Water	11/30/23 09:23	12/01/23 09:14
880-36346-2	TMW-12	Water	11/30/23 12:16	12/01/23 09:14
880-36346-3	Tote	Water	11/30/23 08:15	12/01/23 09:14
880-36346-4	Tote	Water	11/30/23 11:30	12/01/23 09:14

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Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-36346-1
SDG Number: 19-0112-49

Login Number: 36346
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 12/6/2023 1:35:17 PM

JOB DESCRIPTION

EDBU #37
19-0112-49

JOB NUMBER

880-36575-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701



Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Holly Taylor

Generated
12/6/2023 1:35:17 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Laboratory Job ID: 880-36575-1
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36575-1
SDG: 19-0112-49

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36575-1
SDG: 19-0112-49

Job ID: 880-36575-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-36575-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 12/6/2023 10:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 6.3°C

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36575-1
SDG: 19-0112-49

Client Sample ID: TMW-13
Date Collected: 12/05/23 12:13
Date Received: 12/06/23 10:17

Lab Sample ID: 880-36575-1
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1920		25.0	mg/L			12/06/23 12:57	50

Client Sample ID: TMW-18
Date Collected: 12/05/23 15:30
Date Received: 12/06/23 10:17

Lab Sample ID: 880-36575-2
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2800		25.0	mg/L			12/06/23 13:16	50

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36575-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-68488/3

Matrix: Water

Analysis Batch: 68488

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			12/06/23 12:37	1

Lab Sample ID: LCS 880-68488/4

Matrix: Water

Analysis Batch: 68488

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	25.97		mg/L		104	90 - 110

Lab Sample ID: LCSD 880-68488/5

Matrix: Water

Analysis Batch: 68488

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.35		mg/L		101	90 - 110	2	20

Lab Sample ID: 880-36575-1 MS

Matrix: Water

Analysis Batch: 68488

Client Sample ID: TMW-13

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1920		1250	3226		mg/L		105	90 - 110

Lab Sample ID: 880-36575-1 MSD

Matrix: Water

Analysis Batch: 68488

Client Sample ID: TMW-13

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1920		1250	3229		mg/L		105	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36575-1
SDG: 19-0112-49

HPLC/IC

Analysis Batch: 68488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36575-1	TMW-13	Total/NA	Water	300.0	
880-36575-2	TMW-18	Total/NA	Water	300.0	
MB 880-68488/3	Method Blank	Total/NA	Water	300.0	
LCS 880-68488/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-68488/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-36575-1 MS	TMW-13	Total/NA	Water	300.0	
880-36575-1 MSD	TMW-13	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36575-1
SDG: 19-0112-49

Client Sample ID: TMW-13
Date Collected: 12/05/23 12:13
Date Received: 12/06/23 10:17

Lab Sample ID: 880-36575-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50	10 mL	10 mL	68488	12/06/23 12:57	SMC	EET MID

Client Sample ID: TMW-18
Date Collected: 12/05/23 15:30
Date Received: 12/06/23 10:17

Lab Sample ID: 880-36575-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50	10 mL	10 mL	68488	12/06/23 13:16	SMC	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36575-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

- 1
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Method Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36575-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET MID

- Protocol References:**
- EPA = US Environmental Protection Agency
- Laboratory References:**
- EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36575-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-36575-1	TMW-13	Water	12/05/23 12:13	12/06/23 10:17
880-36575-2	TMW-18	Water	12/05/23 15:30	12/06/23 10:17

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Larson & Associates, Inc.
Environmental Consultants
507 N. Marlenfeld, Ste. 202
Midland, TX 79701
432-687-0901

Date Reported to **Robert Nelson / Mark Larson**

DATE: **12/5/23** PAGE **1** OF **1**
PO#: _____ LAB WORK ORDER# _____
PROJECT LOCATION OR NAME **E3DU #37**
LAI PROJECT # **19-012-49** COLLECTOR **DSC**

TRRP report? ☐ Yes ☒ No
S=SOIL W=WATER P=PAINT SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE
Time zone/State

Field Sample ID	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION
MW-13		12/5	12:13	W	1	HCl HNO ₃ H ₂ SO ₄ NaOH ICE UNPRESERVED
MW-18		12/5	15:30	W	1	X

ANALYSES

- BTEX ☐ MTBE ☐
- TPH 418 ☐ TPH 1005 ☐ TPH 1006 ☐
- GASOLINE MOD 8015 ☐
- DIESEL - MOD 8015 ☐
- OIL - MOD 8015 ☐
- VOC 8260 ☐
- SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
- 8081 PESTICIDES ☐ 8151 HERBICIDES ☐
- 8082 PCBs ☐
- TCLP - METALS (RCRA) ☐ TCLP VOC ☐
- TCLP - PEST ☐ HERB ☐ Semi-VOC ☐
- TOTAL METALS (RCRA) ☐ OTHER LIST ☐
- LEAD - TOTAL ☐ DW 200 & ☐ TCLP ☐
- RCL ☐ TOX ☐ FLASHPOINT ☐
- TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
- pH ☐ HEXAVALENT CHROMIUM ☐
- EXPLOSIVES ☐ PECHLORATE ☐
- CHLORIDES ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

Bill directly to Apache

860-36575 Chain of Custody

TOTAL **2**

RELINQUISHED BY (Signature) **[Signature]** DATE/TIME **12/6** RECEIVED BY (Signature) **[Signature]** DATE/TIME **12/6/23**

RELINQUISHED BY (Signature) **[Signature]** DATE/TIME **12/6** RECEIVED BY (Signature) **[Signature]** DATE/TIME **10/17**

RELINQUISHED BY (Signature) **[Signature]** DATE/TIME **12/6** RECEIVED BY (Signature) **[Signature]** DATE/TIME **10/17**

LABORATORY **Xenoco**

TURN AROUND TIME

NORMAL ☐
1 DAY ☒ RUSH!
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP **61/63** CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # **128**
☐ HAND DELIVERED

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-36575-1
SDG Number: 19-0112-49

Login Number: 36575
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 12/5/2023 3:13:18 PM

JOB DESCRIPTION

EBDU 37
19-0112-49

JOB NUMBER

880-36445-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

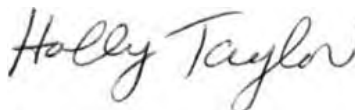
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
12/5/2023 3:13:18 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EBDU 37

Laboratory Job ID: 880-36445-1
SDG: 19-0112-49

Table of Contents

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EBDU 37

Job ID: 880-36445-1
SDG: 19-0112-49

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: EBDU 37

Job ID: 880-36445-1
SDG: 19-0112-49

Job ID: 880-36445-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-36445-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 12/5/2023 8:34 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.6°C

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 880-68424 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

The associated samples are: TMW-14 (880-36445-1), (880-36445-A-1 MS) and (880-36445-A-1 MSD).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU 37

Job ID: 880-36445-1
SDG: 19-0112-49

Client Sample ID: TMW-14
Date Collected: 12/04/23 13:15
Date Received: 12/05/23 08:34

Lab Sample ID: 880-36445-1
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	6010	F1	50.0	mg/L			12/05/23 12:49	100	

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU 37

Job ID: 880-36445-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-68424/3

Matrix: Water

Analysis Batch: 68424

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			12/05/23 12:30	1

Lab Sample ID: LCS 880-68424/4

Matrix: Water

Analysis Batch: 68424

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	26.38		mg/L		106	90 - 110

Lab Sample ID: LCSD 880-68424/5

Matrix: Water

Analysis Batch: 68424

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.02		mg/L		100	90 - 110	5	20

Lab Sample ID: 880-36445-1 MS

Matrix: Water

Analysis Batch: 68424

Client Sample ID: TMW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	6010	F1	2500	8919	F1	mg/L		116	90 - 110

Lab Sample ID: 880-36445-1 MSD

Matrix: Water

Analysis Batch: 68424

Client Sample ID: TMW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	6010	F1	2500	8916	F1	mg/L		116	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU 37

Job ID: 880-36445-1
SDG: 19-0112-49

HPLC/IC

Analysis Batch: 68424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36445-1	TMW-14	Total/NA	Water	300.0	
MB 880-68424/3	Method Blank	Total/NA	Water	300.0	
LCS 880-68424/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-68424/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-36445-1 MS	TMW-14	Total/NA	Water	300.0	
880-36445-1 MSD	TMW-14	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU 37

Job ID: 880-36445-1
SDG: 19-0112-49

Client Sample ID: TMW-14
Date Collected: 12/04/23 13:15
Date Received: 12/05/23 08:34

Lab Sample ID: 880-36445-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100	10 mL	10 mL	68424	12/05/23 12:49	SMC	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU 37

Job ID: 880-36445-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

- 1
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Method Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU 37

Job ID: 880-36445-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET MID

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU 37

Job ID: 880-36445-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-36445-1	TMW-14	Water	12/04/23 13:15	12/05/23 08:34

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Larson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to Robert Nelson / Mark Larson

DATE 12/4/2023 PAGE 1 OF 1
PO# _____ LAB WORK ORDER# _____
PROJECT LOCATION OR NAME Edin 37
LAI PROJECT # 19-0112-19 COLLECTOR DSY

TRRP report ☒ Yes ☐ No

S=SOIL
W=WATER
A=AIR
P=PAINT
SL=SLUDGE
OT=OTHER

TIME ZONE
Time zone/State

Field Sample ID

Lab #
Date
Time
Matrix

of Containers

HCl
HNO₃
H₂SO₄ ☐ NaOH ☐
ICE
UNPRESERVED

ANALYSES

BTEX ☐ MTBE ☐
TPH 418 ☐ TPH 1005 ☐ TPH 1006 ☐
GASOLINE MOD 8015 ☐
DIESEL - MOD 8015 ☐
OIL - MOD 8015 ☐
VOC 8260 ☐
SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
8081 PESTICIDES ☐ 8151 HERBICIDES ☐
8082 PCBs ☐
TCLP - METALS (RCRA) ☐ TCLP VOC ☐
TCLP - PEST ☐ HERB ☐ Semi-VOC ☐
TOTAL METALS (RCRA) ☐ OTHER LIST ☐
LEAD - TOTAL ☐ DW 2008 ☐ TCLP ☐
RCI ☐ TOX ☐ FLASHPOINT ☐
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
PH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PECHLORATE ☐
CHLORIDES ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

Bill Barrett
to Archie



880-36445 Chain of Custody

TOTAL 1

RELINQUISHED BY (Signature) [Signature] DATE/TIME 12/5 834 RECEIVED BY (Signature) [Signature]

RELINQUISHED BY (Signature) DATE/TIME RECEIVED BY (Signature)

RELINQUISHED BY (Signature) DATE/TIME RECEIVED BY (Signature)

LABORATORY Xplwco

TURN AROUND TIME
NORMAL ☐
1 DAY ☒ Rush!
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 44/4.0 THERM# TEB +2
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☐ CARRIER BILL #
☒ HAND DELIVERED

26045 No. 3175
CHAIN-OF-CUSTODY

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-36445-1
SDG Number: 19-0112-49

Login Number: 36445
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Robert Nelson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 12/5/2023 9:09:53 AM

JOB DESCRIPTION

EBDU #32
19-0112-49

JOB NUMBER

880-36386-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
12/5/2023 9:09:53 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EBDU #32

Laboratory Job ID: 880-36386-1
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EBDU #32

Job ID: 880-36386-1
SDG: 19-0112-49

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: EBDU #32

Job ID: 880-36386-1
SDG: 19-0112-49

Job ID: 880-36386-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-36386-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 12/4/2023 9:25 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.8°C

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 880-68296 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #32

Job ID: 880-36386-1
SDG: 19-0112-49

Client Sample ID: TMW-15
Date Collected: 12/01/23 12:08
Date Received: 12/04/23 09:25

Lab Sample ID: 880-36386-1
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	3850	F1	25.0	mg/L			12/04/23 16:57	50	

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #32

Job ID: 880-36386-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-68296/3

Matrix: Water

Analysis Batch: 68296

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			12/04/23 16:25	1

Lab Sample ID: LCS 880-68296/4

Matrix: Water

Analysis Batch: 68296

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	25.11		mg/L		100	90 - 110

Lab Sample ID: LCSD 880-68296/5

Matrix: Water

Analysis Batch: 68296

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.06		mg/L		100	90 - 110	0	20

Lab Sample ID: 880-36386-1 MS

Matrix: Water

Analysis Batch: 68296

Client Sample ID: TMW-15

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	3850	F1	1250	5370	F1	mg/L		122	90 - 110

Lab Sample ID: 880-36386-1 MSD

Matrix: Water

Analysis Batch: 68296

Client Sample ID: TMW-15

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	3850	F1	1250	5377	F1	mg/L		122	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #32

Job ID: 880-36386-1
SDG: 19-0112-49

HPLC/IC

Analysis Batch: 68296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36386-1	TMW-15	Total/NA	Water	300.0	
MB 880-68296/3	Method Blank	Total/NA	Water	300.0	
LCS 880-68296/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-68296/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-36386-1 MS	TMW-15	Total/NA	Water	300.0	
880-36386-1 MSD	TMW-15	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #32

Job ID: 880-36386-1
SDG: 19-0112-49

Client Sample ID: TMW-15
Date Collected: 12/01/23 12:08
Date Received: 12/04/23 09:25

Lab Sample ID: 880-36386-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50	50 mL	50 mL	68296	12/04/23 16:57	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #32

Job ID: 880-36386-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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Method Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #32

Job ID: 880-36386-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET MID

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #32

Job ID: 880-36386-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-36386-1	TMW-15	Water	12/01/23 12:08	12/04/23 09:25

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Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-36386-1

SDG Number: 19-0112-49

Login Number: 36386

List Number: 1

Creator: Kramer, Jessica

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 11/30/2023 11:43:37 AM

JOB DESCRIPTION

EBDU #37
19-0112-49

JOB NUMBER

880-36265-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

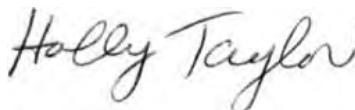
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
11/30/2023 11:43:37 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Laboratory Job ID: 880-36265-1
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36265-1
SDG: 19-0112-49

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36265-1
SDG: 19-0112-49

Job ID: 880-36265-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-36265-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 11/30/2023 8:11 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.7°C

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36265-1
SDG: 19-0112-49

Client Sample ID: TMW-16
Date Collected: 11/29/23 12:53
Date Received: 11/30/23 08:11

Lab Sample ID: 880-36265-1
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	839		10.0	mg/L			11/30/23 11:06	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36265-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-67820/3					Client Sample ID: Method Blank				
Matrix: Water					Prep Type: Total/NA				
Analysis Batch: 67820									
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	<0.500	U	0.500	mg/L			11/29/23 19:53	1	

Lab Sample ID: LCS 880-67820/4					Client Sample ID: Lab Control Sample				
Matrix: Water					Prep Type: Total/NA				
Analysis Batch: 67820									
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	25.0	25.46		mg/L		102	90 - 110		

Lab Sample ID: LCSD 880-67820/5					Client Sample ID: Lab Control Sample Dup				
Matrix: Water					Prep Type: Total/NA				
Analysis Batch: 67820									
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.49		mg/L		102	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36265-1
SDG: 19-0112-49

HPLC/IC

Analysis Batch: 67820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36265-1	TMW-16	Total/NA	Water	300.0	
MB 880-67820/3	Method Blank	Total/NA	Water	300.0	
LCS 880-67820/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-67820/5	Lab Control Sample Dup	Total/NA	Water	300.0	

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Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36265-1
SDG: 19-0112-49

Client Sample ID: TMW-16
Date Collected: 11/29/23 12:53
Date Received: 11/30/23 08:11

Lab Sample ID: 880-36265-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20	10 mL	10 mL	67820	11/30/23 11:06	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36265-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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Method Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36265-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET MID

Protocol References:
EPA = US Environmental Protection Agency

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36265-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-36265-1	TMW-16	Water	11/29/23 12:53	11/30/23 08:11

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11/30/2023

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-36265-1

SDG Number: 19-0112-49

Login Number: 36265

List Number: 1

Creator: Teel, Brianna

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 11/30/2023 10:03:46 AM

JOB DESCRIPTION

EBDU #37
19-0112-49

JOB NUMBER

880-36200-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

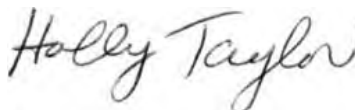
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
11/30/2023 10:03:46 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Laboratory Job ID: 880-36200-1
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36200-1
SDG: 19-0112-49

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36200-1
SDG: 19-0112-49

Job ID: 880-36200-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-36200-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 11/29/2023 8:15 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36200-1
SDG: 19-0112-49

Client Sample ID: TMW-17
Date Collected: 11/28/23 15:21
Date Received: 11/29/23 08:15

Lab Sample ID: 880-36200-1
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	11200		50.0	mg/L			11/29/23 23:13	100	

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36200-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-67820/3

Matrix: Water

Analysis Batch: 67820

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			11/29/23 19:53	1

Lab Sample ID: LCS 880-67820/4

Matrix: Water

Analysis Batch: 67820

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	25.46		mg/L		102	90 - 110

Lab Sample ID: LCSD 880-67820/5

Matrix: Water

Analysis Batch: 67820

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.49		mg/L		102	90 - 110	0	20

Lab Sample ID: 880-36200-1 MS

Matrix: Water

Analysis Batch: 67820

Client Sample ID: TMW-17

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	11200		1250	12390	E 4	mg/L		99	90 - 110

Lab Sample ID: 880-36200-1 MSD

Matrix: Water

Analysis Batch: 67820

Client Sample ID: TMW-17

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	11200		1250	12370	E 4	mg/L		97	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36200-1
SDG: 19-0112-49

HPLC/IC

Analysis Batch: 67820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36200-1	TMW-17	Total/NA	Water	300.0	
MB 880-67820/3	Method Blank	Total/NA	Water	300.0	
LCS 880-67820/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-67820/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-36200-1 MS	TMW-17	Total/NA	Water	300.0	
880-36200-1 MSD	TMW-17	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36200-1
SDG: 19-0112-49

Client Sample ID: TMW-17
Date Collected: 11/28/23 15:21
Date Received: 11/29/23 08:15

Lab Sample ID: 880-36200-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100	10 mL	10 mL	67820	11/29/23 23:13	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36200-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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Method Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36200-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET MID

- Protocol References:**
- EPA = US Environmental Protection Agency
- Laboratory References:**
- EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36200-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-36200-1	TMW-17	Water	11/28/23 15:21	11/29/23 08:15

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No. 3171
CHAIN-OF-CUSTODY

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-36200-1

SDG Number: 19-0112-49

Login Number: 36200

List Number: 1

Creator: Teel, Brianna

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 12/7/2023 3:03:15 PM

JOB DESCRIPTION

EDBU #37
19-0112-49

JOB NUMBER

880-36641-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

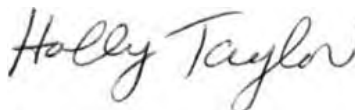
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
12/7/2023 3:03:15 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Laboratory Job ID: 880-36641-1
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36641-1
SDG: 19-0112-49

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36641-1
SDG: 19-0112-49

Job ID: 880-36641-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-36641-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 12/7/2023 9:28 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.5°C

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 880-68588 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36641-1
SDG: 19-0112-49

Client Sample ID: TMW-19
Date Collected: 12/06/23 10:38
Date Received: 12/07/23 09:28

Lab Sample ID: 880-36641-1
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1520	F1	25.0	mg/L			12/07/23 15:00	50

Client Sample ID: TMW-20
Date Collected: 12/06/23 14:07
Date Received: 12/07/23 09:28

Lab Sample ID: 880-36641-2
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	289		5.00	mg/L			12/07/23 15:20	10

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36641-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-68588/3

Matrix: Water

Analysis Batch: 68588

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			12/07/23 14:40	1

Lab Sample ID: LCS 880-68588/4

Matrix: Water

Analysis Batch: 68588

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	26.06		mg/L		104	90 - 110

Lab Sample ID: LCSD 880-68588/5

Matrix: Water

Analysis Batch: 68588

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.40		mg/L		102	90 - 110	3	20

Lab Sample ID: 880-36641-1 MS

Matrix: Water

Analysis Batch: 68588

Client Sample ID: TMW-19

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1520	F1	1250	3078	F1	mg/L		124	90 - 110

Lab Sample ID: 880-36641-1 MSD

Matrix: Water

Analysis Batch: 68588

Client Sample ID: TMW-19

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1520	F1	1250	3073	F1	mg/L		124	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36641-1
SDG: 19-0112-49

HPLC/IC

Analysis Batch: 68588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36641-1	TMW-19	Total/NA	Water	300.0	
880-36641-2	TMW-20	Total/NA	Water	300.0	
MB 880-68588/3	Method Blank	Total/NA	Water	300.0	
LCS 880-68588/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-68588/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-36641-1 MS	TMW-19	Total/NA	Water	300.0	
880-36641-1 MSD	TMW-19	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36641-1
SDG: 19-0112-49

Client Sample ID: TMW-19
Date Collected: 12/06/23 10:38
Date Received: 12/07/23 09:28

Lab Sample ID: 880-36641-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			68588	12/07/23 15:00	CH	EET MID

Client Sample ID: TMW-20
Date Collected: 12/06/23 14:07
Date Received: 12/07/23 09:28

Lab Sample ID: 880-36641-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			68588	12/07/23 15:20	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36641-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

- 1
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Method Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36641-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET MID

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-36641-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-36641-1	TMW-19	Water	12/06/23 10:38	12/07/23 09:28
880-36641-2	TMW-20	Water	12/06/23 14:07	12/07/23 09:28

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Varson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to: Robert Nelson / Mark Larson

DATE 12/6/2023 PAGE 1 OF 1
PO# LAB WORK ORDER#
PROJECT LOCATION OR NAME EBDA 37
LAI PROJECT # 14-0112-49 COLLECTOR DSH/RN

300041

No. 3226
CHAIN-OF-CUSTODY

TRRP report?
☐ Yes ☒ No

S=SOIL
W=WATER
A=AIR
P=PAINT
SL=SLUDGE
OT=OTHER

PRESERVATION

HCl
HNO₃
H₂SO₄ ☐ NaOH ☐
ICE
UNPRESERVED

ANALYSES

BTEX ☐ MTBE ☐
TPH 418 ☐ TPH 1005 ☐ TPH 1006 ☐
GASOLINE MOD 8015 ☐
DIESEL - MOD 8015 ☐
OIL - MOD 8015 ☐
VOC 8260 ☐
SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
8081 PESTICIDES ☐ 8151 HERBICIDES ☐
8082 PCBs ☐
TCAP - METALS (RCRA) ☐ TCAP VOC ☐
TCAP - PEST ☐ HERB ☐ Semi-VOC ☐
TOTAL METALS (RCRA) ☐ OTHER LIST ☐
LEAD - TOTAL ☐ P W 200.8 ☐ TCAP ☐
RO ☐ TOX ☐ FLASHPOINT ☐
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
pH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PECTHOLATE ☐
CHLORIDES ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

Direct bill to
Apache

of Containers

Matrix

Lab #

Date

Time

Field Sample ID

MMW-19
MMW-20

12/6/23 1038
12/1/23 1407

W
W

1
1

X
X

X
X

TOTAL 2

RELINQUISHED BY (Signature)
[Signature]

DATE/TIME
12/7 9:38

RECEIVED BY (Signature)
[Signature]

DATE/TIME
12/10/23 9:28

RELINQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

DATE/TIME

RELINQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

DATE/TIME

LABORATORY Y49603

TURN AROUND TIME

NORMAL ☐
1 DAY ☒ RUSH
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY

RECEIVING TEMP 13.5 THERM#

CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED

CARRIER BILL #

HAND DELIVERED ☒



880-36641 Chain of Custody

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-36641-1

SDG Number: 19-0112-49

Login Number: 36641

List Number: 1

Creator: Teel, Brianna

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 12/13/2023 5:25:36 PM

JOB DESCRIPTION

EBDU #37
19-0112-49

JOB NUMBER

880-36791-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Holly Taylor

Generated
12/13/2023 5:25:36 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Laboratory Job ID: 880-36791-1
SDG: 19-0112-49

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Method Summary	11
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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36791-1
SDG: 19-0112-49

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36791-1
SDG: 19-0112-49

Job ID: 880-36791-1

Laboratory: Eurofins Midland

Narrative

Job Narrative 880-36791-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 12/12/2023 8:51 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.5°C

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36791-1
SDG: 19-0112-49

Client Sample ID: TMW-22
Date Collected: 12/11/23 10:47
Date Received: 12/12/23 08:51

Lab Sample ID: 880-36791-1
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	268		5.00	mg/L			12/12/23 17:14	10	

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36791-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-68938/3
Matrix: Water
Analysis Batch: 68938

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			12/12/23 16:54	1

Lab Sample ID: LCS 880-68938/4
Matrix: Water
Analysis Batch: 68938

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	25.61		mg/L		102	90 - 110

Lab Sample ID: LCSD 880-68938/5
Matrix: Water
Analysis Batch: 68938

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.52		mg/L		102	90 - 110	0	20

Lab Sample ID: 880-36791-1 MS
Matrix: Water
Analysis Batch: 68938

Client Sample ID: TMW-22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	268		250	528.5		mg/L		104	90 - 110

Lab Sample ID: 880-36791-1 MSD
Matrix: Water
Analysis Batch: 68938

Client Sample ID: TMW-22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	268		250	529.9		mg/L		105	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36791-1
SDG: 19-0112-49

HPLC/IC

Analysis Batch: 68938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36791-1	TMW-22	Total/NA	Water	300.0	
MB 880-68938/3	Method Blank	Total/NA	Water	300.0	
LCS 880-68938/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-68938/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-36791-1 MS	TMW-22	Total/NA	Water	300.0	
880-36791-1 MSD	TMW-22	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36791-1
SDG: 19-0112-49

Client Sample ID: TMW-22
Date Collected: 12/11/23 10:47
Date Received: 12/12/23 08:51

Lab Sample ID: 880-36791-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	10 mL	10 mL	68938	12/12/23 17:14	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36791-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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Method Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36791-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET MID

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-36791-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-36791-1	TMW-22	Water	12/11/23 10:47	12/12/23 08:51

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36791 No. 3227
CHAIN-OF-CUSTODY

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-36791-1
SDG Number: 19-0112-49

Login Number: 36791
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 12/19/2023 12:26:12 PM

JOB DESCRIPTION

EBDU #37
19-0112-49

JOB NUMBER

880-37049-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

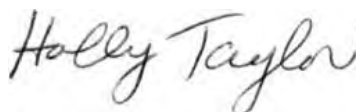
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
12/19/2023 12:26:12 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Laboratory Job ID: 880-37049-1
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37049-1
SDG: 19-0112-49

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project: EBDU #37

Job ID: 880-37049-1

Job ID: 880-37049-1

Eurofins Midland

Job Narrative 880-37049-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 12/18/2023 10:42 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37049-1
SDG: 19-0112-49

Client Sample ID: TMW-24
Date Collected: 12/15/23 13:40
Date Received: 12/18/23 10:42

Lab Sample ID: 880-37049-1
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	262		5.00	mg/L			12/18/23 18:03	10	

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37049-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-69322/3

Matrix: Water

Analysis Batch: 69322

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			12/18/23 17:43	1

Lab Sample ID: LCS 880-69322/4

Matrix: Water

Analysis Batch: 69322

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	25.54		mg/L		102	90 - 110

Lab Sample ID: LCSD 880-69322/5

Matrix: Water

Analysis Batch: 69322

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.72		mg/L		103	90 - 110	1	20

Lab Sample ID: 880-37049-1 MS

Matrix: Water

Analysis Batch: 69322

Client Sample ID: TMW-24

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	262		250	533.3		mg/L		108	90 - 110

Lab Sample ID: 880-37049-1 MSD

Matrix: Water

Analysis Batch: 69322

Client Sample ID: TMW-24

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	262		250	532.4		mg/L		108	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37049-1
SDG: 19-0112-49

HPLC/IC

Analysis Batch: 69322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37049-1	TMW-24	Total/NA	Water	300.0	
MB 880-69322/3	Method Blank	Total/NA	Water	300.0	
LCS 880-69322/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-69322/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-37049-1 MS	TMW-24	Total/NA	Water	300.0	
880-37049-1 MSD	TMW-24	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37049-1
SDG: 19-0112-49

Client Sample ID: TMW-24
Date Collected: 12/15/23 13:40
Date Received: 12/18/23 10:42

Lab Sample ID: 880-37049-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			69322	12/18/23 18:03	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37049-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

- 1
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Method Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37049-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET MID

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37049-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-37049-1	TMW-24	Water	12/15/23 13:40	12/18/23 10:42

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Arson & Associates, Inc.
Environmental Consultants

507 N Warrenfield Ste 202
Midland TX 79701
432-687 0901

Date Reported to

Mark & Jason / Robert Nelson

DATE 12/15/2023 PAGE 1 OF 1
PO# _____ LAB WORK ORDER# _____
PROJECT LOCATION OR NAME ELBOL #37
LAI PROJECT # 19-012-49 COLLECTOR DSG / RN

37049 No. 2355
CHAIN-OF-CUSTODY

TRRP report?
☐ Yes ☒ No

S=SOIL W=WATER P=PAINT
A=AIR SL=SLUDGE OT=OTHER

TIME ZONE

Field Sample ID

Lab #

Date

Time

Matrix

of Containers

HCl

HNO₃

H₂SO₄ ☐ NaOH ☐

ICE

UNPRESERVED

ANALYSES
BTEX ☐ MTBE ☐
TPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐
GASOLINE MOD 8015 ☐
DIESEL - MOD 8015 ☐
OIL - MOD 8015 ☐
VOC 8260 ☐
SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
8081 PESTICIDES ☐ 8151 HERBICIDES ☐
8082 PCBs ☐
TCLP METALS (RCRA) ☐ TCLP VOC ☐
TCLP - PEST ☐ HERB ☐ Semi-VOC ☐
TOTAL METALS (RCRA) ☐ OTHER LIST ☐
LEAD - TOTAL ☐ DW 200.8 ☐ TCLP ☐
RCL ☐ TOX ☐ FLASHPOINT ☐
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
PH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PECTHLORATE ☐
CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

Direct Bill to

Apache

12/15/23

13:40

1

X

X

TOTAL

UNQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

UNQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

UNQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

UNQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

TURN AROUND TIME

NORMAL ☐

1 DAY ☒ RUSH

2 DAY ☐

OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP

5.0/5.0

TERM#

1128

CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED

CARRIER BILL #

☒ HAND DELIVERED



880-37049 Chain of Custody

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-37049-1
SDG Number: 19-0112-49

Login Number: 37049
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Attachment D

Boring Logs and Well Completion Records

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 11:26 Finish: DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: 3,421.56' TOC Elevation: 3,424.35'			REMARKS
					Locked Cover	Vented Cap Riser	Bentonite	
					NUMBER	RECOVERY	DEPTH	BACKGROUND PID READING
								SOIL : _____ PPM SOIL : _____ PPM
	0	Topsoil, 10YR 4/3 Brown, Organic Material	Top Soil			1	2	
	5	Caliche, 2.5YR 8/3 Pink, Increasing Amount of Fine Grained Quartz Sand with Depth, Well Rounded, Quartz Clast ≈ 5mm	Caliche			2	8	
	10	Quartz Sand, 2.5YR 8/2 Pinkish White, Very Fine Grained Quartz Sand, Well Rounded, Well Sorted				3	20	
	15	7.5YR 6/4 Light Brown, Fine Grained Quartz Sand, Well Rounded, Moderately Sorted, Quartz Clast ≈ 1-2mm				4	30	
	20	Darker Color with depth, 7.5YR 5/6 Strong Brown						
	25							
	30							
	35							
	40		SW					
	45							
	50	Moist @ 50'				5	50	
	55							
	60	Water Injected				6	60	
	65							
	70							
	75							
	80	TD: 80.00'				7	80	
	85							

12/21/23
57.12'

- ☐ ONE CONTINUOUS AUGER SAMPLER
☐ STANDARD PENETRATION TEST
☐ UNDISTURBED SAMPLE
☐ WATER TABLE (24 HRS)

- ☐ WATER TABLE (TIME OF BORING)
☐ LABORATORY TEST LOCATION
☐ PENETROMETER (TONS/ SQ. FT)
☐ NO RECOVERY

JOB NUMBER : Apache/ 19-0112-49

HOLE DIAMETER : 5"

LOCATION : EBDU # 37/ 32°28'52.4141", 103°07'19.7965"W

LAI GEOLOGIST : R. Nelson

DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary

Larson & Associates, Inc.
Environmental Consultants

DRILL DATE :
11/29/23

BORING NUMBER :
TMW-11

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 09:25 Finish: DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: 3,424.30' TOC Elevation: 3427.22'			REMARKS
					Locked Cover	Vented Cap Riser	Bentonite	
					NUMBER	RECOVERY	DEPTH	BACKGROUND PID READING
								SOIL : _____ PPM SOIL : _____ PPM
	0	Topsoil, 10YR 4/3 Brown, Organic Material	Top Soil			1	2	
	5	Caliche, 7.5YR 8/3 Pink, Increasing Amount of Fine Grained Quartz Sand with Depth, Well Rounded, Quartz Clast ≈ 5mm	Caliche					
	10							
	15							
	18	Quartz Sand, 7.5YR 8/2 Pinkish White, Very Fine Grained Quartz Sand, Well Rounded, Well Sorted				2	18	
	20	7.5YR 6/4 Light Brown, Fine Grained Quartz Sand, Well Rounded, Moderately Sorted, Quartz Clast ≈ 1-2mm						
	25	Darker Color with depth, 7.5YR 5/6 Strong Brown				3	25	
	30							
	35					4	35	
	40		SW					
	45							
	50	Moist @ 50'						
	55							
	60	Water Injected				5	60	
	65							
	70							
	75							
	80	TD: 80.00'				6	80	
	85							

12/21/23
58.73'

60.16
62.16
Graded Silica Sand
2" Sch. 40 PVC Threaded 0.0.0" Slotted Screw
82.13
82.81
Cap

- ☐ ONE CONTINUOUS AUGER SAMPLER
☐ STANDARD PENETRATION TEST
☐ UNDISTURBED SAMPLE
☐ WATER TABLE (24 HRS)

- ☐ WATER TABLE (TIME OF BORING)
☐ LABORATORY TEST LOCATION
☐ PENETROMETER (TONS/ SQ. FT)
☐ NO RECOVERY

JOB NUMBER : Apache/ 19-0112-49

HOLE DIAMETER : 5"

LOCATION : EBDU # 37/ 32°28'53.4598"N, 103°07'14.8709"W

LAI GEOLOGIST : R. Nelson

DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary

Larson & Associates, Inc.
Environmental Consultants

DRILL DATE :
11/30/23

BORING NUMBER :
TMW-12

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 09:25 Finish: 11:13 MST DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: 3,426.21' TOC Elevation: 3428.98'			REMARKS
					Locked Cover	Vented Cap Riser	Bentonite	
	0	Topsoil, 10YR 4/3 Brown, Organic Material	Top Soil					BACKGROUND PID READING SOIL : _____ PPM SOIL : _____ PPM
	5	Caliche, 7.5YR 8/3 Pink, Increasing Amount of Fine Grained Quartz Sand with Depth, Well Rounded, Quartz Clast ≈ 0.5mm	Caliche					
	15	Quartz Sand, 7.5YR 8/2 Pinkish White, Very Fine Grained						
	20	Quartz Sand, Well Rounded, Well Sorted						
	25	7.5YR 6/4 Light Brown, Fine Grained Quartz Sand, Well Rounded, Moderately Sorted, Quartz Clasts ≈ 1-2mm						
	35	Darker Color with depth, 7.5YR 5/6 Strong Brown						
	40		SW					
	45							
	50							
	55							
	60	Water Injected						
	65							
	70							
	75							
	80							
	85	TD: 85.00'						

12/20/23
60.98'

61.24
63.24

Graded Silica Sand
2" Sch. 40 PVC Threaded 0.0.0" Slotted Screw

83.21
83.89
85.0

Cap Slough



ONE CONTINUOUS AUGER SAMPLER



STANDARD PENETRATION TEST



UNDISTURBED SAMPLE



WATER TABLE (24 HRS)



WATER TABLE (TIME OF BORING)



LABORATORY TEST LOCATION



PENETROMETER (TONS/ SQ. FT)



NR NO RECOVERY

JOB NUMBER : Apache/ 19-0112-49

HOLE DIAMETER : 5"

LOCATION : EBDU # 37/ 32°28'51.4724", -103°07'10.5589"

LAI GEOLOGIST : R. Nelson

DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary

Larson & Associates, Inc.
Environmental Consultants

DRILL DATE :
12/04/2023

BORING NUMBER :
TMW-13

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 08:54 Finish: 10:15 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: 3,426.76' TOC Elevation: 3,429.54'			REMARKS
					Locked Cover	Vented Cap Riser	Bentonite	
					NUMBER	RECOVERY	DEPTH	BACKGROUND PID READING SOIL : _____ PPM SOIL : _____ PPM
	0	Topsoil, 10YR 4/3 Brown, Organic Material	Top Soil			1	2	
	5	Caliche, 7.5YR 8/3 Pink, Increasing Amount of Fine Grained Quartz Sand with Depth, Well Rounded, Quartz Clast ≈ 5mm	Caliche			2	12	
	15	Quartz Sand, 7.5YR 8/2 Pinkish White, Very Fine Grained				3	20	
	20	Quartz Sand, Well Rounded, Well Sorted						
	25	7.5YR 6/4 Light Brown, Fine Grained Quartz Sand, Well Rounded, Moderately Sorted,						
	30	Quartz Clast ≈ 1-2mm				4	30	
	35	Darker Color with depth, 7.5YR 5/6 Strong Brown						
	40		SW					
	45							
	50							
	55							
	60							
	65							
	70							
	75							
	80	TD: 80.00'				5	80	
	85							

12/20/23
62.24'

62.96
64.96

Graded Silica Sand

2" Sch. 40 PVC Threaded 0.0" Slotted Screw

84.93
85.61

Cap

- ☐ ONE CONTINUOUS AUGER SAMPLER
- ☐ STANDARD PENETRATION TEST
- ☐ UNDISTURBED SAMPLE
- ☐ WATER TABLE (24 HRS)

- ☐ WATER TABLE (TIME OF BORING)
- ☐ LABORATORY TEST LOCATION
- ☐ PENETROMETER (TONS/ SQ. FT)
- ☐ NO RECOVERY

JOB NUMBER : Apache/ 19-0112-49

HOLE DIAMETER : 5"

LOCATION : EBDU # 37/ 32°28'46.6967"N, 103°07'08.6721"W

LAI GEOLOGIST : R. Nelson

DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary

Larson & Associates, Inc.
Environmental Consultants

DRILL DATE :
12/01/2023

BORING NUMBER :
TMW-14

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: Finish: DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: 3,423.18' TOC Elevation: 3,425.97'			REMARKS
					Locked Cover	Vented Cap Riser	Bentonite	
					NUMBER	RECOVERY	DEPTH	BACKGROUND PID READING
								SOIL : _____ PPM SOIL : _____ PPM
	0	Topsoil, 10YR 4/3 Brown, Organic Material	Top Soil			1	2	
	5	Caliche, 7.5YR 8/3 Pink, Increasing Amount of Fine Grained Quartz Sand with Depth, Well Rounded, Quartz Clast ≈ 5mm	Caliche			2	13	
	15	Quartz Sand, 7.5YR 8/2 Pinkish White, Very Fine Grained				3	20	
	20	Quartz Sand, Well Rounded, Well Sorted						
	25	7.5YR 6/4 Light Brown, Fine Grained Quartz Sand, Well Rounded, Moderately Sorted,				4	30	
	30	Quartz Clast ≈ 1-2mm, Wet Darker Color with depth, 7.5YR 5/6 Strong Brown						
	35							
	40		SW					
	45							
	50							
	55							
	60	Moist, Water Injected						
	65							
	70							
	75							
	80	TD: 80.00'				5	80	
	85							

12/20/23
59.00
▼
—

56.97
58.97
78.94
79.62
80.0

Bentonite Pellets

Graded Silica Sand

2" Sch.
40 PVC
Threaded
0.0.0" Slotted
Screw

Cap Slough



ONE CONTINUOUS AUGER SAMPLER



STANDARD PENETRATION TEST



UNDISTURBED SAMPLE



WATER TABLE (24 HRS)



WATER TABLE (TIME OF BORING)



LABORATORY TEST LOCATION



PENETROMETER (TONS/ SQ. FT)



NR NO RECOVERY

JOB NUMBER : Apache/ 19-0112-49

HOLE DIAMETER : 5"

LOCATION : EBDU # 37/ 32°28'44.9502"N,
103°07'11.7480"W

LAI GEOLOGIST : R. Nelson

DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary

Larson & Associates, Inc.
Environmental Consultants

DRILL DATE :
11/30/2023

BORING NUMBER :
TMW-15

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 09:35 Finish: 10:17 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: 3,420.73' TOC Elevation: 3,423.65'			REMARKS
					Locked Cover	Vented Cap Riser	Bentonite	
					NUMBER	RECOVERY	DEPTH	BACKGROUND PID READING SOIL : _____ PPM SOIL : _____ PPM
	0	Topsoil, 10YR 4/3 Brown, Caliche Clast ≈ 10-20mm, Organic Material	Top Soil			1	3	
	5	Caliche, 7.5YR 8/3 Pink, Increasing Amount of Fine Grained Quartz Sand with Depth, Well Rounded, Quartz Clast ≈ 5mm	Caliche			2	8	
	10	Quartz Sand, 7.5YR 8/2 Pinkish White, Very Fine Grained Quartz Sand, Well Rounded, Well Sorted				3	15	
	15	7.5YR 6/4 Light Brown, Fine Grained Quartz Sand, Well Rounded, Moderately Sorted, Quartz Clast ≈ 1-2mm				4	20	
	20	Darker Color with depth, 7.5YR 5/6 Strong Brown						
	25							
	30							
	35							
	40		SW					
	45							
	50							
	55	Moist				5	55	
	60	Water Injected						
	65							
	70							
	75							
	80	TD: 80.00'				6	80	
	85							

12/20/2023

57.27



59.14

61.14

Graded Silica Sand

2" Sch.
40 PVC
Threaded
0.0.0" Slotted
Screw

81.11

81.79

Cap

☐ ONE CONTINUOUS AUGER SAMPLER

☐ STANDARD PENETRATION TEST

☐ UNDISTURBED SAMPLE

☐ WATER TABLE (24 HRS)

WATER TABLE (TIME OF BORING)

LABORATORY TEST LOCATION

PENETROMETER (TONS/ SQ. FT)

NO RECOVERY

JOB NUMBER : Apache/ 19-0112-49

HOLE DIAMETER : 5"

LOCATION : EBDU # 37/ 32°28'42.8747"N,
103°07'19.3738"W

LAI GEOLOGIST : R. Nelson

DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary

DRILL DATE :
11/29/2023BORING NUMBER :
TMW-16

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 10:15 Finish: DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: 3,422.52' TOC Elevation: 3,425.68'			REMARKS
					Locked Cover	Vented Cap Riser	Bentonite	
					NUMBER	RECOVERY	DEPTH	BACKGROUND PID READING SOIL : _____ PPM SOIL : _____ PPM
	0	Sandy Clay, Poorly Graded Sand with Clay, 10YR 5/4	CH					
	5	Yellowish Brown, Quartz Clasts ≈ 0-10mm in size, Moderately Sorted, Well Rounded						
	10	Caliche, 7.5YR 8/3 Pink, Clasts ≈ 0-10mm, Moderately Sorted, Well Rounded	Caliche					
	15	Quartz Sand, 7.5YR 8/2 Pinkish White, Well Sorted, Well Rounded						
	20	Change in Color 7.5YR 6/8 Reddish Yellow						
	25							
	30							
	35							
	40		SW					
	45	Change in Color 5YR 5/8 Yellowish Red						
	50							
	55	Moist						
	60	Water Injected						
	65							
	70							
	75							
	80	TD: 80.00'						
	85							

12/20/2023

58.40'



58.81

60.81

Bentonite Pellets

Graded Silica Sand

2" Sch.
40 PVC
Threaded
0.0.0" Slotted
Screw

80.78

81.46

Cap



ONE CONTINUOUS AUGER SAMPLER



STANDARD PENETRATION TEST



UNDISTURBED SAMPLE



WATER TABLE (24 HRS)



WATER TABLE (TIME OF BORING)



LABORATORY TEST LOCATION



PENETROMETER (TONS/ SQ. FT)



NR NO RECOVERY

JOB NUMBER : Apache/ 19-0112-49

HOLE DIAMETER : 5"

LOCATION : EBDU # 37/ 32°28'45.4199"N,
103°07'14.3198"W

LAI GEOLOGIST : R. Nelson

DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary

Larson & Associates, Inc.
Environmental Consultants

DRILL DATE :

11/28/2023

BORING NUMBER :

TMW-17

Released to Imaging: 7/24/2024 4:45:59 PM

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 12:15 Finish: 14:06 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: 3,420.79' TOC Elevation: 3,423.79'			REMARKS
					Locked Cover	Vented Cap Riser	Bentonite	
	0	Topsoil, 10YR 4/3 Brown, Organic Material	Top Soil					BACKGROUND PID READING SOIL : _____ PPM SOIL : _____ PPM
	5	Caliche, 2.5YR 8/3 Pink, Increasing Amount of Fine Grained Quartz Sand with Depth, Well Rounded, Quartz Clast ≈ 0.5mm	Caliche					
	15	Quartz Sand, 7.5YR 8/2 Pinkish White, Very Fine Grained Quartz Sand, Well Rounded, Well Sorted						
	25	Densely Packed						
	30	Water Injected						
	35							
	40		SW					
	45							
	50							
	55							
	60							
	65							
	70							
	75							
	80	TD: 80.00'						
	85							

12/20/2023

57.93'

▼

—

57.66

59.66

Graded Silica Sand

2" Sch.
40 PVC
Threaded
0.0.0" Slotted
Screw

79.63

80.31

Cap



ONE CONTINUOUS AUGER SAMPLER



WATER TABLE (TIME OF BORING)



STANDARD PENETRATION TEST



LABORATORY TEST LOCATION



UNDISTURBED SAMPLE



PENETROMETER (TONS/ SQ. FT)



WATER TABLE (24 HRS)



NR NO RECOVERY

JOB NUMBER : Apache/ 19-0112-49

HOLE DIAMETER : 5"

LOCATION : EBDU # 37/ 32°28'39.6650", -103°07'20.1318"

LAI GEOLOGIST : R. Nelson

DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary

Larson & Associates, Inc.
Environmental ConsultantsDRILL DATE :
12/05/2023BORING NUMBER :
TMW-19

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 09:35 MST Finish: 11:25 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: 3,426.46' TOC Elevation: 3,429.34'			REMARKS
					Locked Cover	Vented Cap Riser	Bentonite	
	0	Topsoil, 10YR 4/3 Brown, Organic Material	Top Soil					
	5	Caliche, 7.5YR 8/3 Pink, Increasing Amount of Fine Grained Quartz Sand with Depth, Well Rounded, Quartz Clast ≈ 0.5mm	Caliche					
	15	Quartz Sand, 7.5YR 6/4 Light Brown, Fine Grained Quartz Sand, Well Rounded, Moderately Sorted, Quartz Clast ≈ 1-2mm						
	20	Darker Color with depth, 7.5YR 5/6 Strong Brown, Well Sorted						
	30							
	35							
	40		SW					
	45							
	50							
	55							
	60	Water Injected						
	65							
	70							
	75							
	78	Silty Clay (Redbed), 5YR 4/6, Yellowish Red, Very Fine Grained Quartz Sand, Dona, Dry	RD					
	80							
	85							
		TD: 80.00'						

12/20/23
62.38'



ONE CONTINUOUS AUGER SAMPLER



STANDARD PENETRATION TEST



UNDISTURBED SAMPLE



WATER TABLE (24 HRS)



WATER TABLE (TIME OF BORING)



LABORATORY TEST LOCATION



PENETROMETER (TONS/ SQ. FT)



NR NO RECOVERY

JOB NUMBER : Apache/ 19-0112-49

HOLE DIAMETER : 5"

LOCATION : EBDU # 37/ 32°28'43.1706", -103°07'07.6036"

LAI GEOLOGIST : R. Nelson

DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary

Larson & Associates, Inc.
Environmental Consultants

DRILL DATE :
12/06/2023

BORING NUMBER :
TMW-20

BORING RECORD

		Start: 09:15			Surface Elevation: 3,429.87' TOC Elevation: 3,432.20'		REMARKS	
GEOLOGIC UNIT	DEPTH	Finish: 11:15 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG			NUMBER	RECOVERY
							DEPTH	BACKGROUND PID READING
							1	2
	0	Topsoil, 10YR 4/3 Brown, Organic Material	Top Soil					
	5	Caliche, 7.5YR 8/3 Pink, Increasing Amount of Fine Grained Quartz Sand with Depth, Well Rounded, Quartz Clast ≈ 0.5mm	Caliche					
	10							
	15						2	15
	20							
	25	Quartz Sand, 7.5YR 6/4 Light Brown, Fine Grained Quartz Sand, Well Rounded, Moderately Sorted, Quartz Clast ≈ 1-2mm					3	25
	30							
	35							
	40		SW					
	45	Darker Color with depth, 7.5YR 5/6 Strong Brown, Well Sorted						
	50				49.15			
	55				51.15			
	60	Water Injected						
	65							
	70							
	75	Silty Clay (Redbed), 5YR 4/6, Yellowish Red, Very Fine Grained Quartz Sand, Dona, Dry	RD		71.12			
	80				71.80			
	85				75.00			
		TD: 75'					4	80

12/21/23
64.98'

- ☐ ONE CONTINUOUS AUGER SAMPLER
☐ STANDARD PENETRATION TEST
☐ UNDISTURBED SAMPLE
☐ WATER TABLE (24 HRS)

- WATER TABLE (TIME OF BORING)
 LABORATORY TEST LOCATION
 PENETROMETER (TONS/ SQ. FT)
 NO RECOVERY

JOB NUMBER : Apache/ 19-0112-49

HOLE DIAMETER : 5"

LOCATION : EBDU # 37/ 32°28'48.6833", -103°07'04.2879"

LAI GEOLOGIST : R. Nelson

DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary

Larson & Associates, Inc.
Environmental Consultants

DRILL DATE :
12/07/2023

BORING NUMBER :
TMW-21

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 13:26 Finish: 14:56 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: 3,431.29' TOC Elevation: 3,434.17'			REMARKS
					Locked Cover	Vented Cap Riser	Bentonite	
					NUMBER	RECOVERY	DEPTH	BACKGROUND PID READING SOIL : _____ PPM SOIL : _____ PPM
	0	Topsoil, 10YR 4/3 Brown, Organic Material	Top Soil				1	2
	5	Caliche, 7.5YR 8/3 Pink, Increasing Amount of Fine Grained Quartz Sand with Depth, Well Rounded, Quartz Clast ≈ 0.5mm	Caliche					
	15	Quartz Sand, 7.5YR 8/2 Pinkish White, Very Fine Grained					2	15
	20	Quartz Sand, Well Rounded, Well Sorted						
	25	7.5YR 6/4 Light Brown, Fine Grained Quartz Sand, Well Rounded, Moderately Sorted, Quartz Clasts ≈ 1-2mm					3	25
	30	Darker Color with depth, 7.5YR 5/6 Strong Brown					4	30
	35	Water Injected at 35'					5	35
	40							
	45		SW					
	50				47.37			
	55				49.37			
	60							
	65							
	70				69.34			
	73				70.02			
	75	Silty Clay (Redbed), 5YR 4/6, Yellowish Red, Very Fine Grained Quartz Sand, Dry	RD				6	75
	80							
	85							

12/20/23
65.97'

JOB NUMBER : Apache/ 19-0112-49

HOLE DIAMETER : 5"

LOCATION : EBDU # 37/ 32°28'53.5612"N
-103°07'05.2315"W

LAI GEOLOGIST : R. Nelson

DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary

Larson & Associates, Inc.
Environmental Consultants

DRILL DATE :
12/07/2023

BORING NUMBER :
TMW-22

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 09:55 Finish: 11:55 MST DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: 3,421.28' TOC Elevation: 3,424.23'			REMARKS
					Locked Cover	Vented Cap Riser	Bentonite	
					NUMBER	RECOVERY	DEPTH	BACKGROUND PID READING SOIL : _____ PPM SOIL : _____ PPM
	0	Topsoil, 10YR 4/3 Brown, Organic Material	Top Soil				2	
	5	Caliche, 7.5YR 8/3 Pink, Increasing Amount of Fine Grained Quartz Sand with Depth, Well Rounded, Quartz Clast ≈ 0.5mm	Caliche					
	15	Quartz Sand, 7.5YR 8/2 Pinkish White, Very Fine Grained					2	15
	20	Quartz Sand, Well Rounded, Well Sorted						
	25							
	30	7.5YR 6/4 Light Brown, Fine Grained Quartz Sand, Well Rounded, Moderately Sorted, Quartz Clasts ≈ 1-2mm					3	30
	35	Darker Color with depth, 7.5YR 5/6 Strong Brown						
	40	Water Injected at 40'	SW				4	40
	45							
	50							
	55							
	60							
	65							
	68							
	70	Silty Clay (Redbed) 5YR 4/6, Yellowish Red, Very Fine Grained Quartz Sand, Demo Dry	RD				5	70
	75							
	80							
	85							

12/20/2023 58.56'

46.69

48.69

68.66

69.34

70.0

Bentonite Pellets

Graded Silica Sand

2" Sch. 40 PVC Threaded 0.0" Slotted Screw

Cap Slough

☐ ONE CONTINUOUS AUGER SAMPLER ☐ STANDARD PENETRATION TEST ☐ UNDISTURBED SAMPLE ☐ WATER TABLE (24 HRS)	☐ WATER TABLE (TIME OF BORING) ☐ LABORATORY TEST LOCATION ☐ PENETROMETER (TONS/ SQ. FT) ☐ NO RECOVERY	JOB NUMBER : <u>Apache/ 19-0112-49</u> HOLE DIAMETER : <u>5"</u> LOCATION : <u>EBDU # 37/</u> 32°28'35.92"N, 103°07'14.06"W LAI GEOLOGIST : <u>R. Nelson</u> DRILLING CONTRACTOR : <u>SDI</u> DRILLING METHOD : <u>Air Rotary</u>
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	DRILL DATE : <u>12/13/2023</u>	BORING NUMBER : <u>TMW-23</u>
--	--------------------------------	-------------------------------

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 13:45 Finish: 14:55 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: 3,418.54' TOC Elevation: 3,421.74'			REMARKS
					Locked Cover	Vented Cap Riser	Bentonite	
					NUMBER	RECOVERY	DEPTH	BACKGROUND PID READING SOIL : _____ PPM SOIL : _____ PPM
	0	Topsoil, 10YR 4/3 Brown, Organic Material	Top Soil			1	2	
	5	Caliche, 7.5YR 8/3 Pink, Increasing Amount of Fine Grained Quartz Sand with Depth, Well Rounded, Quartz Clast ≈ 0.5mm	Caliche					
	20	Quartz Sand, 7.5YR 8/2 Pinkish White, Very Fine Grained Quartz Sand, Well Rounded, Well Sorted				2	20	
	35	Quartz Sand, 7.5YR 6/4 Light Brown, Fine Grained Quartz Sand, Well Rounded, Moderately Sorted, Quartz Clast ≈ 1-2mm	SW			3	35	
	40	Water Injected at 40'				4	40	
	63	Silty Clay (Redbed), 5YR 4/6, Yellowish Red, Very Fine Grained Quartz Sand, Dona, Dry	RD			5	65	
	65	TD: 65.00'						

12/20/23
56.21'

37.33
39.33
59.30
59.98
65.0

Bentonite Pellets
Graded Silica Sand
2" Sch. 40 PVC Threaded 0.0.0" Slotted Screw
Cap
Slough

ONE CONTINUOUS AUGER SAMPLER STANDARD PENETRATION TEST UNDISTURBED SAMPLE WATER TABLE (24 HRS) WATER TABLE (TIME OF BORING) LABORATORY TEST LOCATION PENETROMETER (TONS/ SQ. FT) NO RECOVERY	JOB NUMBER : <u>Apache/ 19-0112-49</u> HOLE DIAMETER : <u>5"</u> LOCATION : <u>EBDU # 37/</u> 32°28'36.33722"N 103°07'21.23108"W LAI GEOLOGIST : <u>R. Nelson</u> DRILLING CONTRACTOR : <u>SDI</u> DRILLING METHOD : <u>Air Rotary</u>
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Larson & Associates, Inc. Environmental Consultants	DRILL DATE : 12/13/2023	BORING NUMBER : TMW-24
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Appendix E

Monitoring Well Laboratory Reports



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 3/22/2024 9:58:33 AM

JOB DESCRIPTION

EBDU #37
19-01112-49

JOB NUMBER

880-40887-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701



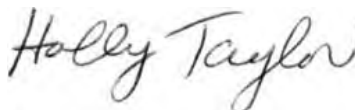
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
3/22/2024 9:58:33 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Laboratory Job ID: 880-40887-1
SDG: 19-01112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project: EBDU #37

Job ID: 880-40887-1

Job ID: 880-40887-1

Eurofins Midland

Job Narrative 880-40887-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 3/15/2024 8:55 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C.

Receipt Exceptions

The following samples were submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): TMW-1 (880-40887-1), TMW-2 (880-40887-2), TMW-3 (880-40887-3), TMW-4 (880-40887-4), TMW-5 (880-40887-5), TMW-6 (880-40887-6), TMW-7 (880-40887-7), TMW-8 (880-40887-8), TMW-9 (880-40887-9), TMW-10 (880-40887-10), TMW-11 (880-40887-11), TMW-12 (880-40887-12), TMW-13 (880-40887-13), Windmill (880-40887-14) and Dup-01 (880-40887-15)
Sample 15

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: Windmill (880-40887-14). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample duplicate (LCSD) for analytical batch 880-75949 recovered outside control limits for the following analytes: o-Xylene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 880-75765 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Client Sample ID: TMW-1

Lab Sample ID: 880-40887-1

Date Collected: 03/14/24 09:54

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/19/24 21:52	1
Toluene	<0.00200	U	0.00200	mg/L			03/19/24 21:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/19/24 21:52	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/19/24 21:52	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/19/24 21:52	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/19/24 21:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		70 - 130		03/19/24 21:52	1
1,4-Difluorobenzene (Surr)	92		70 - 130		03/19/24 21:52	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/19/24 21:52	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	136		2.50	mg/L			03/15/24 18:06	5

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	551		50.0	mg/L			03/15/24 20:09	1

Client Sample ID: TMW-2

Lab Sample ID: 880-40887-2

Date Collected: 03/14/24 10:42

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/19/24 22:13	1
Toluene	<0.00200	U	0.00200	mg/L			03/19/24 22:13	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/19/24 22:13	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/19/24 22:13	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/19/24 22:13	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/19/24 22:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		70 - 130		03/19/24 22:13	1
1,4-Difluorobenzene (Surr)	88		70 - 130		03/19/24 22:13	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/19/24 22:13	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	249		5.00	mg/L			03/15/24 18:12	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	992		50.0	mg/L			03/15/24 20:09	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Client Sample ID: TMW-3

Lab Sample ID: 880-40887-3

Date Collected: 03/14/24 10:20

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/19/24 22:33	1
Toluene	<0.00200	U	0.00200	mg/L			03/19/24 22:33	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/19/24 22:33	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/19/24 22:33	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/19/24 22:33	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/19/24 22:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130		03/19/24 22:33	1
1,4-Difluorobenzene (Surr)	87		70 - 130		03/19/24 22:33	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/19/24 22:33	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	234		5.00	mg/L			03/15/24 18:18	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	959		50.0	mg/L			03/15/24 20:09	1

Client Sample ID: TMW-4

Lab Sample ID: 880-40887-4

Date Collected: 03/14/24 12:49

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/19/24 22:54	1
Toluene	<0.00200	U	0.00200	mg/L			03/19/24 22:54	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/19/24 22:54	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/19/24 22:54	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/19/24 22:54	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/19/24 22:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		70 - 130		03/19/24 22:54	1
1,4-Difluorobenzene (Surr)	84		70 - 130		03/19/24 22:54	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/19/24 22:54	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	580		10.0	mg/L			03/15/24 18:24	20

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1750		100	mg/L			03/15/24 20:09	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Client Sample ID: TMW-5

Lab Sample ID: 880-40887-5

Date Collected: 03/14/24 13:03

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/19/24 23:14	1
Toluene	<0.00200	U	0.00200	mg/L			03/19/24 23:14	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/19/24 23:14	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/19/24 23:14	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/19/24 23:14	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/19/24 23:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130		03/19/24 23:14	1
1,4-Difluorobenzene (Surr)	86		70 - 130		03/19/24 23:14	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/19/24 23:14	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2980	F1	25.0	mg/L			03/15/24 18:30	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	5360		200	mg/L			03/15/24 20:09	1

Client Sample ID: TMW-6

Lab Sample ID: 880-40887-6

Date Collected: 03/14/24 13:16

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/19/24 23:35	1
Toluene	<0.00200	U	0.00200	mg/L			03/19/24 23:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/19/24 23:35	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/19/24 23:35	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/19/24 23:35	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/19/24 23:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130		03/19/24 23:35	1
1,4-Difluorobenzene (Surr)	90		70 - 130		03/19/24 23:35	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/19/24 23:35	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1500		25.0	mg/L			03/15/24 18:49	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3280		200	mg/L			03/15/24 20:09	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Client Sample ID: TMW-7

Lab Sample ID: 880-40887-7

Date Collected: 03/14/24 12:35

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/19/24 23:55	1
Toluene	<0.00200	U	0.00200	mg/L			03/19/24 23:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/19/24 23:55	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/19/24 23:55	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/19/24 23:55	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/19/24 23:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		70 - 130		03/19/24 23:55	1
1,4-Difluorobenzene (Surr)	92		70 - 130		03/19/24 23:55	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/19/24 23:55	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1740		25.0	mg/L			03/15/24 18:55	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3690		200	mg/L			03/15/24 20:09	1

Client Sample ID: TMW-8

Lab Sample ID: 880-40887-8

Date Collected: 03/14/24 11:00

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/20/24 00:16	1
Toluene	<0.00200	U	0.00200	mg/L			03/20/24 00:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/20/24 00:16	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/20/24 00:16	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/20/24 00:16	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/20/24 00:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130		03/20/24 00:16	1
1,4-Difluorobenzene (Surr)	87		70 - 130		03/20/24 00:16	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/20/24 00:16	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	655		10.0	mg/L			03/15/24 19:13	20

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1830		100	mg/L			03/15/24 20:09	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Client Sample ID: TMW-9

Lab Sample ID: 880-40887-9

Date Collected: 03/14/24 10:03

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/20/24 00:36	1
Toluene	<0.00200	U	0.00200	mg/L			03/20/24 00:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/20/24 00:36	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/20/24 00:36	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/20/24 00:36	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/20/24 00:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130		03/20/24 00:36	1
1,4-Difluorobenzene (Surr)	78		70 - 130		03/20/24 00:36	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/20/24 00:36	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29.3		2.50	mg/L			03/15/24 19:20	5

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	373		50.0	mg/L			03/15/24 20:09	1

Client Sample ID: TMW-10

Lab Sample ID: 880-40887-10

Date Collected: 03/14/24 09:44

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/20/24 00:57	1
Toluene	<0.00200	U	0.00200	mg/L			03/20/24 00:57	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/20/24 00:57	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/20/24 00:57	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/20/24 00:57	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/20/24 00:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130		03/20/24 00:57	1
1,4-Difluorobenzene (Surr)	86		70 - 130		03/20/24 00:57	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/20/24 00:57	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.0		2.50	mg/L			03/15/24 19:26	5

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	405		50.0	mg/L			03/15/24 20:09	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Client Sample ID: TMW-11

Lab Sample ID: 880-40887-11

Date Collected: 03/14/24 11:14

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/20/24 02:20	1
Toluene	<0.00200	U	0.00200	mg/L			03/20/24 02:20	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/20/24 02:20	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/20/24 02:20	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/20/24 02:20	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/20/24 02:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130		03/20/24 02:20	1
1,4-Difluorobenzene (Surr)	90		70 - 130		03/20/24 02:20	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/20/24 02:20	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	318		5.00	mg/L			03/15/24 19:32	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1090		50.0	mg/L			03/15/24 20:09	1

Client Sample ID: TMW-12

Lab Sample ID: 880-40887-12

Date Collected: 03/14/24 11:30

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/20/24 02:41	1
Toluene	<0.00200	U	0.00200	mg/L			03/20/24 02:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/20/24 02:41	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/20/24 02:41	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/20/24 02:41	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/20/24 02:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		70 - 130		03/20/24 02:41	1
1,4-Difluorobenzene (Surr)	90		70 - 130		03/20/24 02:41	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/20/24 02:41	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	448		5.00	mg/L			03/15/24 19:38	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1390		100	mg/L			03/15/24 20:09	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Client Sample ID: TMW-13

Lab Sample ID: 880-40887-13

Date Collected: 03/14/24 13:29

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/20/24 03:01	1
Toluene	<0.00200	U	0.00200	mg/L			03/20/24 03:01	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/20/24 03:01	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/20/24 03:01	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/20/24 03:01	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/20/24 03:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130		03/20/24 03:01	1
1,4-Difluorobenzene (Surr)	89		70 - 130		03/20/24 03:01	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/20/24 03:01	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1690		25.0	mg/L			03/15/24 19:44	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3480		200	mg/L			03/15/24 20:09	1

Client Sample ID: Windmill

Lab Sample ID: 880-40887-14

Date Collected: 03/14/24 09:30

Matrix: Water

Date Received: 03/15/24 08:55

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/20/24 03:22	1
Toluene	<0.00200	U	0.00200	mg/L			03/20/24 03:22	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/20/24 03:22	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/20/24 03:22	1
o-Xylene	<0.00200	U *	0.00200	mg/L			03/20/24 03:22	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/20/24 03:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130		03/20/24 03:22	1
1,4-Difluorobenzene (Surr)	69	S1-	70 - 130		03/20/24 03:22	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/20/24 03:22	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	471		5.00	mg/L			03/15/24 19:50	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1080		50.0	mg/L			03/15/24 20:09	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Client Sample ID: Dup-01
Date Collected: 03/14/24 00:00
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-15
Matrix: Water

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/L			03/20/24 03:42	1	
Toluene	<0.00200	U	0.00200	mg/L			03/20/24 03:42	1	
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/20/24 03:42	1	
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/20/24 03:42	1	
o-Xylene	<0.00200	U *+	0.00200	mg/L			03/20/24 03:42	1	
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/20/24 03:42	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	78		70 - 130				03/20/24 03:42	1	
1,4-Difluorobenzene (Surr)	90		70 - 130				03/20/24 03:42	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00400	U	0.00400	mg/L			03/20/24 03:42	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	328		5.00	mg/L			03/19/24 08:16	10	
General Chemistry									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total Dissolved Solids (SM 2540C)	986		50.0	mg/L			03/15/24 20:09	1	

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Method: 8021B - Volatile Organic Compounds (GC)
Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
880-40887-1	TMW-1	76	92
880-40887-1 MS	TMW-1	112	100
880-40887-1 MSD	TMW-1	117	112
880-40887-2	TMW-2	82	88
880-40887-3	TMW-3	81	87
880-40887-4	TMW-4	82	84
880-40887-5	TMW-5	81	86
880-40887-6	TMW-6	78	90
880-40887-7	TMW-7	80	92
880-40887-8	TMW-8	83	87
880-40887-9	TMW-9	95	78
880-40887-10	TMW-10	79	86
880-40887-11	TMW-11	78	90
880-40887-12	TMW-12	77	90
880-40887-13	TMW-13	78	89
880-40887-14	Windmill	92	69 S1-
880-40887-15	Dup-01	78	90
LCS 880-75949/34	Lab Control Sample	112	90
LCSD 880-75949/35	Lab Control Sample Dup	117	107
MB 880-75818/5-A	Method Blank	71	92
MB 880-75949/39	Method Blank	71	90
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-75818/5-A
Matrix: Water
Analysis Batch: 75949

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 75818

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L		03/18/24 10:27	03/19/24 10:55	1
Toluene	<0.00200	U	0.00200	mg/L		03/18/24 10:27	03/19/24 10:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/L		03/18/24 10:27	03/19/24 10:55	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L		03/18/24 10:27	03/19/24 10:55	1
o-Xylene	<0.00200	U	0.00200	mg/L		03/18/24 10:27	03/19/24 10:55	1
Xylenes, Total	<0.00400	U	0.00400	mg/L		03/18/24 10:27	03/19/24 10:55	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130			03/18/24 10:27	03/19/24 10:55	1
1,4-Difluorobenzene (Surr)	92		70 - 130			03/18/24 10:27	03/19/24 10:55	1

Lab Sample ID: MB 880-75949/39
Matrix: Water
Analysis Batch: 75949

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/19/24 21:31	1
Toluene	<0.00200	U	0.00200	mg/L			03/19/24 21:31	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/19/24 21:31	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/19/24 21:31	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/19/24 21:31	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/19/24 21:31	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130				03/19/24 21:31	1
1,4-Difluorobenzene (Surr)	90		70 - 130				03/19/24 21:31	1

Lab Sample ID: LCS 880-75949/34
Matrix: Water
Analysis Batch: 75949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08666		mg/L		87	70 - 130
Toluene	0.100	0.09146		mg/L		91	70 - 130
Ethylbenzene	0.100	0.1067		mg/L		107	70 - 130
m,p-Xylenes	0.200	0.2117		mg/L		106	70 - 130
o-Xylene	0.100	0.1070		mg/L		107	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	112		70 - 130				
1,4-Difluorobenzene (Surr)	90		70 - 130				

Lab Sample ID: LCSD 880-75949/35
Matrix: Water
Analysis Batch: 75949

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1043		mg/L		104	70 - 130	19	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-75949/35

Matrix: Water

Analysis Batch: 75949

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike		LCSD	LCSD	Unit	D	%Rec	%Rec		RPD
	Added	Result	Qualifier	Limit				Limits	RPD	
Toluene	0.100	0.09786			mg/L		98	70 - 130	7	20
Ethylbenzene	0.100	0.1096			mg/L		110	70 - 130	3	20
m,p-Xylenes	0.200	0.2154			mg/L		108	70 - 130	2	20
o-Xylene	0.100	0.1307	*+		mg/L		131	70 - 130	20	20
LCSD		LCSD								
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)	117		70 - 130							
1,4-Difluorobenzene (Surr)	107		70 - 130							

Lab Sample ID: 880-40887-1 MS

Matrix: Water

Analysis Batch: 75949

Client Sample ID: TMW-1

Prep Type: Total/NA

Analyte	Sample		Spike	MS		Unit	D	%Rec	%Rec	
	Result	Qualifier		Result	Qualifier				Limits	RPD
Benzene	<0.00200	U	0.100	0.1035		mg/L		103	70 - 130	
Toluene	<0.00200	U	0.100	0.1054		mg/L		105	70 - 130	
Ethylbenzene	<0.00200	U	0.100	0.1257		mg/L		126	70 - 130	
m,p-Xylenes	<0.00400	U	0.200	0.2430		mg/L		122	70 - 130	
o-Xylene	<0.00200	U *	0.100	0.1228		mg/L		123	70 - 130	
MS		MS								
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)	112		70 - 130							
1,4-Difluorobenzene (Surr)	100		70 - 130							

Lab Sample ID: 880-40887-1 MSD

Matrix: Water

Analysis Batch: 75949

Client Sample ID: TMW-1

Prep Type: Total/NA

Analyte	Sample		Spike	MSD		Unit	D	%Rec	%Rec		RPD
	Result	Qualifier		Result	Qualifier				Limits	RPD	
Benzene	<0.00200	U	0.100	0.1121		mg/L		112	70 - 130	8	25
Toluene	<0.00200	U	0.100	0.1080		mg/L		108	70 - 130	2	25
Ethylbenzene	<0.00200	U	0.100	0.1257		mg/L		126	70 - 130	0	25
m,p-Xylenes	<0.00400	U	0.200	0.2522		mg/L		126	70 - 130	4	25
o-Xylene	<0.00200	U *	0.100	0.1274		mg/L		127	70 - 130	4	25
MSD		MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	117		70 - 130								
1,4-Difluorobenzene (Surr)	112		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-75676/3

Matrix: Water

Analysis Batch: 75676

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	<0.500	U	0.500	mg/L			03/19/24 05:58	1

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-75676/4

Matrix: Water

Analysis Batch: 75676

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	25.93		mg/L		104	90 - 110

Lab Sample ID: LCSD 880-75676/5

Matrix: Water

Analysis Batch: 75676

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.97		mg/L		104	90 - 110	0	20

Lab Sample ID: MB 880-75765/3

Matrix: Water

Analysis Batch: 75765

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			03/15/24 16:46	1

Lab Sample ID: LCS 880-75765/4

Matrix: Water

Analysis Batch: 75765

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	24.00		mg/L		96	90 - 110

Lab Sample ID: LCSD 880-75765/5

Matrix: Water

Analysis Batch: 75765

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	23.04		mg/L		92	90 - 110	4	20

Lab Sample ID: 880-40887-5 MS

Matrix: Water

Analysis Batch: 75765

Client Sample ID: TMW-5

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2980	F1	1250	4453	F1	mg/L		118	90 - 110

Lab Sample ID: 880-40887-5 MSD

Matrix: Water

Analysis Batch: 75765

Client Sample ID: TMW-5

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2980	F1	1250	4385	F1	mg/L		112	90 - 110	2	20

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 880-75768/1

Matrix: Water

Analysis Batch: 75768

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<25.0	U	25.0	mg/L			03/15/24 20:09	1

Lab Sample ID: LCS 880-75768/2

Matrix: Water

Analysis Batch: 75768

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	981.0		mg/L		98	80 - 120

Lab Sample ID: LCSD 880-75768/3

Matrix: Water

Analysis Batch: 75768

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	984.0		mg/L		98	80 - 120	0	10

Lab Sample ID: 880-40887-8 DU

Matrix: Water

Analysis Batch: 75768

Client Sample ID: TMW-8

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1830		1798		mg/L		2	10

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

GC VOA

Prep Batch: 75818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-75818/5-A	Method Blank	Total/NA	Water	5035	

Analysis Batch: 75949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40887-1	TMW-1	Total/NA	Water	8021B	
880-40887-2	TMW-2	Total/NA	Water	8021B	
880-40887-3	TMW-3	Total/NA	Water	8021B	
880-40887-4	TMW-4	Total/NA	Water	8021B	
880-40887-5	TMW-5	Total/NA	Water	8021B	
880-40887-6	TMW-6	Total/NA	Water	8021B	
880-40887-7	TMW-7	Total/NA	Water	8021B	
880-40887-8	TMW-8	Total/NA	Water	8021B	
880-40887-9	TMW-9	Total/NA	Water	8021B	
880-40887-10	TMW-10	Total/NA	Water	8021B	
880-40887-11	TMW-11	Total/NA	Water	8021B	
880-40887-12	TMW-12	Total/NA	Water	8021B	
880-40887-13	TMW-13	Total/NA	Water	8021B	
880-40887-14	Windmill	Total/NA	Water	8021B	
880-40887-15	Dup-01	Total/NA	Water	8021B	
MB 880-75818/5-A	Method Blank	Total/NA	Water	8021B	75818
MB 880-75949/39	Method Blank	Total/NA	Water	8021B	
LCS 880-75949/34	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-75949/35	Lab Control Sample Dup	Total/NA	Water	8021B	
880-40887-1 MS	TMW-1	Total/NA	Water	8021B	
880-40887-1 MSD	TMW-1	Total/NA	Water	8021B	

Analysis Batch: 76087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40887-1	TMW-1	Total/NA	Water	Total BTEX	
880-40887-2	TMW-2	Total/NA	Water	Total BTEX	
880-40887-3	TMW-3	Total/NA	Water	Total BTEX	
880-40887-4	TMW-4	Total/NA	Water	Total BTEX	
880-40887-5	TMW-5	Total/NA	Water	Total BTEX	
880-40887-6	TMW-6	Total/NA	Water	Total BTEX	
880-40887-7	TMW-7	Total/NA	Water	Total BTEX	
880-40887-8	TMW-8	Total/NA	Water	Total BTEX	
880-40887-9	TMW-9	Total/NA	Water	Total BTEX	
880-40887-10	TMW-10	Total/NA	Water	Total BTEX	
880-40887-11	TMW-11	Total/NA	Water	Total BTEX	
880-40887-12	TMW-12	Total/NA	Water	Total BTEX	
880-40887-13	TMW-13	Total/NA	Water	Total BTEX	
880-40887-14	Windmill	Total/NA	Water	Total BTEX	
880-40887-15	Dup-01	Total/NA	Water	Total BTEX	

HPLC/IC

Analysis Batch: 75676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40887-15	Dup-01	Total/NA	Water	300.0	
MB 880-75676/3	Method Blank	Total/NA	Water	300.0	
LCS 880-75676/4	Lab Control Sample	Total/NA	Water	300.0	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

HPLC/IC (Continued)

Analysis Batch: 75676 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-75676/5	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 75765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40887-1	TMW-1	Total/NA	Water	300.0	
880-40887-2	TMW-2	Total/NA	Water	300.0	
880-40887-3	TMW-3	Total/NA	Water	300.0	
880-40887-4	TMW-4	Total/NA	Water	300.0	
880-40887-5	TMW-5	Total/NA	Water	300.0	
880-40887-6	TMW-6	Total/NA	Water	300.0	
880-40887-7	TMW-7	Total/NA	Water	300.0	
880-40887-8	TMW-8	Total/NA	Water	300.0	
880-40887-9	TMW-9	Total/NA	Water	300.0	
880-40887-10	TMW-10	Total/NA	Water	300.0	
880-40887-11	TMW-11	Total/NA	Water	300.0	
880-40887-12	TMW-12	Total/NA	Water	300.0	
880-40887-13	TMW-13	Total/NA	Water	300.0	
880-40887-14	Windmill	Total/NA	Water	300.0	
MB 880-75765/3	Method Blank	Total/NA	Water	300.0	
LCS 880-75765/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-75765/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-40887-5 MS	TMW-5	Total/NA	Water	300.0	
880-40887-5 MSD	TMW-5	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 75768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40887-1	TMW-1	Total/NA	Water	SM 2540C	
880-40887-2	TMW-2	Total/NA	Water	SM 2540C	
880-40887-3	TMW-3	Total/NA	Water	SM 2540C	
880-40887-4	TMW-4	Total/NA	Water	SM 2540C	
880-40887-5	TMW-5	Total/NA	Water	SM 2540C	
880-40887-6	TMW-6	Total/NA	Water	SM 2540C	
880-40887-7	TMW-7	Total/NA	Water	SM 2540C	
880-40887-8	TMW-8	Total/NA	Water	SM 2540C	
880-40887-9	TMW-9	Total/NA	Water	SM 2540C	
880-40887-10	TMW-10	Total/NA	Water	SM 2540C	
880-40887-11	TMW-11	Total/NA	Water	SM 2540C	
880-40887-12	TMW-12	Total/NA	Water	SM 2540C	
880-40887-13	TMW-13	Total/NA	Water	SM 2540C	
880-40887-14	Windmill	Total/NA	Water	SM 2540C	
880-40887-15	Dup-01	Total/NA	Water	SM 2540C	
MB 880-75768/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 880-75768/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 880-75768/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
880-40887-8 DU	TMW-8	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Client Sample ID: TMW-1
Date Collected: 03/14/24 09:54
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/19/24 21:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/19/24 21:52	SM	EET MID
Total/NA	Analysis	300.0		5	10 mL	10 mL	75765	03/15/24 18:06	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Client Sample ID: TMW-2
Date Collected: 03/14/24 10:42
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/19/24 22:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/19/24 22:13	SM	EET MID
Total/NA	Analysis	300.0		10	10 mL	10 mL	75765	03/15/24 18:12	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Client Sample ID: TMW-3
Date Collected: 03/14/24 10:20
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/19/24 22:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/19/24 22:33	SM	EET MID
Total/NA	Analysis	300.0		10	10 mL	10 mL	75765	03/15/24 18:18	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Client Sample ID: TMW-4
Date Collected: 03/14/24 12:49
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/19/24 22:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/19/24 22:54	SM	EET MID
Total/NA	Analysis	300.0		20	10 mL	10 mL	75765	03/15/24 18:24	CH	EET MID
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Client Sample ID: TMW-5
Date Collected: 03/14/24 13:03
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/19/24 23:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/19/24 23:14	SM	EET MID
Total/NA	Analysis	300.0		50	10 mL	10 mL	75765	03/15/24 18:30	CH	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

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Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Client Sample ID: TMW-6
Date Collected: 03/14/24 13:16
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/19/24 23:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/19/24 23:35	SM	EET MID
Total/NA	Analysis	300.0		50	10 mL	10 mL	75765	03/15/24 18:49	CH	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Client Sample ID: TMW-7
Date Collected: 03/14/24 12:35
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/19/24 23:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/19/24 23:55	SM	EET MID
Total/NA	Analysis	300.0		50	10 mL	10 mL	75765	03/15/24 18:55	CH	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Client Sample ID: TMW-8
Date Collected: 03/14/24 11:00
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/20/24 00:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/20/24 00:16	SM	EET MID
Total/NA	Analysis	300.0		20	10 mL	10 mL	75765	03/15/24 19:13	CH	EET MID
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Client Sample ID: TMW-9
Date Collected: 03/14/24 10:03
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/20/24 00:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/20/24 00:36	SM	EET MID
Total/NA	Analysis	300.0		5	10 mL	10 mL	75765	03/15/24 19:20	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Client Sample ID: TMW-10
Date Collected: 03/14/24 09:44
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/20/24 00:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/20/24 00:57	SM	EET MID
Total/NA	Analysis	300.0		5	10 mL	10 mL	75765	03/15/24 19:26	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Client Sample ID: TMW-11
Date Collected: 03/14/24 11:14
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/20/24 02:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/20/24 02:20	SM	EET MID
Total/NA	Analysis	300.0		10	10 mL	10 mL	75765	03/15/24 19:32	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Client Sample ID: TMW-12
Date Collected: 03/14/24 11:30
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/20/24 02:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/20/24 02:41	SM	EET MID
Total/NA	Analysis	300.0		10	10 mL	10 mL	75765	03/15/24 19:38	CH	EET MID
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Client Sample ID: TMW-13
Date Collected: 03/14/24 13:29
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/20/24 03:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/20/24 03:01	SM	EET MID
Total/NA	Analysis	300.0		50	10 mL	10 mL	75765	03/15/24 19:44	CH	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Client Sample ID: Windmill
Date Collected: 03/14/24 09:30
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/20/24 03:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/20/24 03:22	SM	EET MID
Total/NA	Analysis	300.0		10	10 mL	10 mL	75765	03/15/24 19:50	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Client Sample ID: Dup-01
Date Collected: 03/14/24 00:00
Date Received: 03/15/24 08:55

Lab Sample ID: 880-40887-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	75949	03/20/24 03:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76087	03/20/24 03:42	SM	EET MID
Total/NA	Analysis	300.0		10	10 mL	10 mL	75676	03/19/24 08:16	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	75768	03/15/24 20:09	SMC	EET MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Water	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET MID
5030B	Purge and Trap	SW846	EET MID

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-40887-1
SDG: 19-01112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-40887-1	TMW-1	Water	03/14/24 09:54	03/15/24 08:55
880-40887-2	TMW-2	Water	03/14/24 10:42	03/15/24 08:55
880-40887-3	TMW-3	Water	03/14/24 10:20	03/15/24 08:55
880-40887-4	TMW-4	Water	03/14/24 12:49	03/15/24 08:55
880-40887-5	TMW-5	Water	03/14/24 13:03	03/15/24 08:55
880-40887-6	TMW-6	Water	03/14/24 13:16	03/15/24 08:55
880-40887-7	TMW-7	Water	03/14/24 12:35	03/15/24 08:55
880-40887-8	TMW-8	Water	03/14/24 11:00	03/15/24 08:55
880-40887-9	TMW-9	Water	03/14/24 10:03	03/15/24 08:55
880-40887-10	TMW-10	Water	03/14/24 09:44	03/15/24 08:55
880-40887-11	TMW-11	Water	03/14/24 11:14	03/15/24 08:55
880-40887-12	TMW-12	Water	03/14/24 11:30	03/15/24 08:55
880-40887-13	TMW-13	Water	03/14/24 13:29	03/15/24 08:55
880-40887-14	Windmill	Water	03/14/24 09:30	03/15/24 08:55
880-40887-15	Dup-01	Water	03/14/24 00:00	03/15/24 08:55

Larson & Associates, Inc.
Environmental Consultants

507 N. Marientfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to Mark Larson/Robert Nelson

DATE 3/14/2024

PO#

PROJECT LOCATION OR NAME

LAI PROJECT # 19-0112-49

PAGE 1 OF 1

LAB WORK ORDER#

EXP# 437

COLLECTOR Mark Nelson

887 No. 3070

CHAIN-OF-CUSTODY

Field Sample ID	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO ₃	H ₂ SO ₄ ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES		FIELD NOTES	
TRMS-1		3/14/24	0954	W	5				X		☒ BTEX ☐ MTBE ☐ TPH 418 ☐ TPH 1005 ☐ TPH 1006 ☐	☐ GASOLINE MOD 8015 ☐ DIESEL MOD 8015 ☐ OIL MOD 8015 ☐ VOC 8260 ☐ SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ 8082 PCBs ☐ TCLP - METALS (RCRA) ☐ TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ TOTAL METALS (RCRA) ☐ OTHER LIST ☐ LEAD - TOTAL ☐ DW 200.8 ☐ TCLP ☐ RCI ☐ TOX ☐ FLASHPOINT ☐ TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ PH ☐ HEXAVALENT CHROMIUM ☐ PENTACHLORATE ☐ EXPLOSIVES ☐ ANIONS ☐ ALKALINITY ☐ CHLORIDE ☐	Direct bio to Apache	
TRMS-2			1042											
TRMS-3			1020											
TRMS-4			1249											
TRMS-5			1303											
TRMS-6			1316											
TRMS-7			1235											
TRMS-8			1100											
TRMS-9			1603											
TRMS-10			0944											
TRMS-11			1114											
TRMS-12			1130											
TRMS-13			1329											
W indmill			0930											
TOTAL	14													

RECEIVED BY (Signature) Mark Nelson DATE/TIME 3/15/24 0855 RECEIVED BY (Signature) Mark Nelson

RELINQUISHED BY (Signature) Mark Nelson DATE/TIME 3/15/24 0855 RECEIVED BY (Signature) Mark Nelson

RELINQUISHED BY (Signature) Mark Nelson DATE/TIME 3/15/24 0855 RECEIVED BY (Signature) Mark Nelson

LABORATORY Xeno

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 23.12 THERM# 168-10
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☒ CARRIER BILL #
☒ HAND DELIVERED

880-40887 Chain of Custody



Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-40887-1
SDG Number: 19-01112-49

Login Number: 40887
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received extra samples not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 3/27/2024 10:54:02 AM

JOB DESCRIPTION

EDBU #37
19-0112-49

JOB NUMBER

880-40975-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701



Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Holly Taylor

Generated
3/27/2024 10:54:02 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Laboratory Job ID: 880-40975-1
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
⬆	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project: EDBU #37

Job ID: 880-40975-1

Job ID: 880-40975-1

Eurofins Midland

Job Narrative 880-40975-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 3/18/2024 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.3°C.

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-76563/8). Evidence of matrix interferences is not obvious.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 880-76122 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

TMW-14 (880-40975-1), TMW-15 (880-40975-2), TMW-16 (880-40975-3), TMW-17 (880-40975-4), TMW-18 (880-40975-5), TMW-19 (880-40975-6), TMW-20 (880-40975-7), TMW-21 (880-40975-8), TMW-22 (880-40975-9), TMW-23 (880-40975-10), (880-40975-B-1 MS) and (880-40975-B-1 MSD)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Client Sample ID: TMW-14

Lab Sample ID: 880-40975-1

Date Collected: 03/15/24 09:09

Matrix: Water

Date Received: 03/18/24 09:00

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 12:18	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 12:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 12:18	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 12:18	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 12:18	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 12:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		70 - 130		03/26/24 12:18	1
1,4-Difluorobenzene (Surr)	81		70 - 130		03/26/24 12:18	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/26/24 12:18	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1810	F1	25.0	mg/L			03/20/24 17:19	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2820		200	mg/L			03/19/24 18:00	1

Client Sample ID: TMW-15

Lab Sample ID: 880-40975-2

Date Collected: 03/15/24 09:30

Matrix: Water

Date Received: 03/18/24 09:00

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 12:45	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 12:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 12:45	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 12:45	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 12:45	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 12:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130		03/26/24 12:45	1
1,4-Difluorobenzene (Surr)	79		70 - 130		03/26/24 12:45	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/26/24 12:45	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2160		25.0	mg/L			03/20/24 17:38	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3400		200	mg/L			03/19/24 18:00	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Client Sample ID: TMW-16

Lab Sample ID: 880-40975-3

Date Collected: 03/15/24 10:15

Matrix: Water

Date Received: 03/18/24 09:00

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 13:12	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 13:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 13:12	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 13:12	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 13:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 13:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130		03/26/24 13:12	1
1,4-Difluorobenzene (Surr)	84		70 - 130		03/26/24 13:12	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/26/24 13:12	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43.0		2.50	mg/L			03/20/24 17:44	5

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	380		50.0	mg/L			03/19/24 18:00	1

Client Sample ID: TMW-17

Lab Sample ID: 880-40975-4

Date Collected: 03/15/24 10:00

Matrix: Water

Date Received: 03/18/24 09:00

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 13:39	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 13:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 13:39	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 13:39	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 13:39	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 13:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130		03/26/24 13:39	1
1,4-Difluorobenzene (Surr)	85		70 - 130		03/26/24 13:39	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/26/24 13:39	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5680		25.0	mg/L			03/20/24 18:02	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	8930		500	mg/L			03/19/24 18:00	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Client Sample ID: TMW-18

Lab Sample ID: 880-40975-5

Date Collected: 03/15/24 09:40

Matrix: Water

Date Received: 03/18/24 09:00

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 14:06	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 14:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 14:06	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 14:06	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 14:06	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 14:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130		03/26/24 14:06	1
1,4-Difluorobenzene (Surr)	94		70 - 130		03/26/24 14:06	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/26/24 14:06	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	908		10.0	mg/L			03/20/24 18:09	20

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1650		100	mg/L			03/19/24 18:00	1

Client Sample ID: TMW-19

Lab Sample ID: 880-40975-6

Date Collected: 03/15/24 10:35

Matrix: Water

Date Received: 03/18/24 09:00

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 14:32	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 14:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 14:32	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 14:32	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 14:32	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 14:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130		03/26/24 14:32	1
1,4-Difluorobenzene (Surr)	82		70 - 130		03/26/24 14:32	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/26/24 14:32	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	553		5.00	mg/L			03/20/24 18:15	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1070		50.0	mg/L			03/19/24 18:00	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Client Sample ID: TMW-20

Lab Sample ID: 880-40975-7

Date Collected: 03/15/24 12:15

Matrix: Water

Date Received: 03/18/24 09:00

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 14:59	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 14:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 14:59	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 14:59	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 14:59	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 14:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130		03/26/24 14:59	1
1,4-Difluorobenzene (Surr)	82		70 - 130		03/26/24 14:59	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/26/24 14:59	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	385		5.00	mg/L			03/20/24 18:21	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	937		50.0	mg/L			03/19/24 18:00	1

Client Sample ID: TMW-21

Lab Sample ID: 880-40975-8

Date Collected: 03/15/24 12:29

Matrix: Water

Date Received: 03/18/24 09:00

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 15:26	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 15:26	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 15:26	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 15:26	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 15:26	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 15:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130		03/26/24 15:26	1
1,4-Difluorobenzene (Surr)	89		70 - 130		03/26/24 15:26	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/26/24 15:26	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	310		2.50	mg/L			03/20/24 18:27	5

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	902		50.0	mg/L			03/19/24 18:00	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Client Sample ID: TMW-22

Lab Sample ID: 880-40975-9

Date Collected: 03/15/24 13:30

Matrix: Water

Date Received: 03/18/24 09:00

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 15:53	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 15:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 15:53	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 15:53	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 15:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 15:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130		03/26/24 15:53	1
1,4-Difluorobenzene (Surr)	94		70 - 130		03/26/24 15:53	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/26/24 15:53	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	342		5.00	mg/L			03/20/24 18:33	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	918		50.0	mg/L			03/19/24 18:00	1

Client Sample ID: TMW-23

Lab Sample ID: 880-40975-10

Date Collected: 03/15/24 12:00

Matrix: Water

Date Received: 03/18/24 09:00

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 16:20	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 16:20	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 16:20	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 16:20	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 16:20	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 16:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130		03/26/24 16:20	1
1,4-Difluorobenzene (Surr)	85		70 - 130		03/26/24 16:20	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/26/24 16:20	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1020		10.0	mg/L			03/20/24 18:39	20

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2020		100	mg/L			03/19/24 18:00	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Client Sample ID: TMW-24

Lab Sample ID: 880-40975-11

Date Collected: 03/15/24 11:45

Matrix: Water

Date Received: 03/18/24 09:00

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 18:08	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 18:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 18:08	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 18:08	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 18:08	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 18:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130		03/26/24 18:08	1
1,4-Difluorobenzene (Surr)	89		70 - 130		03/26/24 18:08	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/26/24 18:08	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	330		5.00	mg/L			03/20/24 19:28	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1060		50.0	mg/L			03/19/24 18:00	1

Client Sample ID: Dup-2

Lab Sample ID: 880-40975-12

Date Collected: 03/15/24 00:00

Matrix: Water

Date Received: 03/18/24 09:00

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 18:33	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 18:33	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 18:33	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 18:33	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 18:33	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 18:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130		03/26/24 18:33	1
1,4-Difluorobenzene (Surr)	85		70 - 130		03/26/24 18:33	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			03/26/24 18:33	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1330		10.0	mg/L			03/20/24 19:47	20

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2530		200	mg/L			03/19/24 18:00	1

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Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Method: 8021B - Volatile Organic Compounds (GC)
Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
880-40975-1	TMW-14	82	81
880-40975-1 MS	TMW-14	85	94
880-40975-1 MSD	TMW-14	84	75
880-40975-2	TMW-15	86	79
880-40975-3	TMW-16	91	84
880-40975-4	TMW-17	89	85
880-40975-5	TMW-18	99	94
880-40975-6	TMW-19	87	82
880-40975-7	TMW-20	86	82
880-40975-8	TMW-21	92	89
880-40975-9	TMW-22	95	94
880-40975-10	TMW-23	93	85
880-40975-11	TMW-24	90	89
880-40975-12	Dup-2	87	85
LCS 880-76563/3	Lab Control Sample	80	93
LCSD 880-76563/4	Lab Control Sample Dup	83	92
MB 880-76563/8	Method Blank	54 S1-	85
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-76563/8

Matrix: Water

Analysis Batch: 76563

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			03/26/24 11:52	1
Toluene	<0.00200	U	0.00200	mg/L			03/26/24 11:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			03/26/24 11:52	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			03/26/24 11:52	1
o-Xylene	<0.00200	U	0.00200	mg/L			03/26/24 11:52	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			03/26/24 11:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	54	S1-	70 - 130		03/26/24 11:52	1
1,4-Difluorobenzene (Surr)	85		70 - 130		03/26/24 11:52	1

Lab Sample ID: LCS 880-76563/3

Matrix: Water

Analysis Batch: 76563

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1017		mg/L		102	70 - 130
Toluene	0.100	0.1065		mg/L		107	70 - 130
Ethylbenzene	0.100	0.1016		mg/L		102	70 - 130
m,p-Xylenes	0.200	0.2051		mg/L		103	70 - 130
o-Xylene	0.100	0.1056		mg/L		106	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	80		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: LCSD 880-76563/4

Matrix: Water

Analysis Batch: 76563

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08710		mg/L		87	70 - 130	15	20
Toluene	0.100	0.09196		mg/L		92	70 - 130	15	20
Ethylbenzene	0.100	0.08790		mg/L		88	70 - 130	14	20
m,p-Xylenes	0.200	0.1814		mg/L		91	70 - 130	12	20
o-Xylene	0.100	0.09050		mg/L		91	70 - 130	15	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	83		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: 880-40975-1 MS

Matrix: Water

Analysis Batch: 76563

Client Sample ID: TMW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.08796		mg/L		87	70 - 130
Toluene	<0.00200	U	0.100	0.09427		mg/L		94	70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-40975-1 MS

Client Sample ID: TMW-14

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 76563

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.08690		mg/L		87	70 - 130
m,p-Xylenes	<0.00400	U	0.200	0.1747		mg/L		87	70 - 130
o-Xylene	<0.00200	U	0.100	0.09102		mg/L		91	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	85		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-40975-1 MSD

Client Sample ID: TMW-14

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 76563

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.07976		mg/L		79	70 - 130	10	25
Toluene	<0.00200	U	0.100	0.08910		mg/L		88	70 - 130	6	25
Ethylbenzene	<0.00200	U	0.100	0.07970		mg/L		80	70 - 130	9	25
m,p-Xylenes	<0.00400	U	0.200	0.1630		mg/L		82	70 - 130	7	25
o-Xylene	<0.00200	U	0.100	0.08579		mg/L		86	70 - 130	6	25

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	84		70 - 130
1,4-Difluorobenzene (Surr)	75		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-76122/3

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 76122

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			03/20/24 15:35	1

Lab Sample ID: LCS 880-76122/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 76122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	24.16		mg/L		97	90 - 110

Lab Sample ID: LCSD 880-76122/5

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 76122

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	24.18		mg/L		97	90 - 110	0	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-40975-1 MS

Matrix: Water

Analysis Batch: 76122

Client Sample ID: TMW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1810	F1	1250	2879	F1	mg/L		85	90 - 110

Lab Sample ID: 880-40975-1 MSD

Matrix: Water

Analysis Batch: 76122

Client Sample ID: TMW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1810	F1	1250	2821	F1	mg/L		81	90 - 110	2	20

Lab Sample ID: MB 880-76126/3

Matrix: Water

Analysis Batch: 76126

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			03/20/24 19:10	1

Lab Sample ID: LCS 880-76126/4

Matrix: Water

Analysis Batch: 76126

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	24.61		mg/L		98	90 - 110

Lab Sample ID: LCSD 880-76126/5

Matrix: Water

Analysis Batch: 76126

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	24.59		mg/L		98	90 - 110	0	20

Lab Sample ID: 880-40975-11 MS

Matrix: Water

Analysis Batch: 76126

Client Sample ID: TMW-24

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	330		250	578.5		mg/L		99	90 - 110

Lab Sample ID: 880-40975-11 MSD

Matrix: Water

Analysis Batch: 76126

Client Sample ID: TMW-24

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	330		250	578.0		mg/L		99	90 - 110	0	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 880-76041/1
Matrix: Water
Analysis Batch: 76041

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<25.0	U	25.0	mg/L			03/19/24 18:00	1

Lab Sample ID: LCS 880-76041/2
Matrix: Water
Analysis Batch: 76041

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	983.0		mg/L		98	80 - 120

Lab Sample ID: LCSD 880-76041/3
Matrix: Water
Analysis Batch: 76041

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	1020		mg/L		102	80 - 120	4	10

Lab Sample ID: 880-40975-1 DU
Matrix: Water
Analysis Batch: 76041

Client Sample ID: TMW-14
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2820		2824		mg/L		0	10

Lab Sample ID: 880-40975-11 DU
Matrix: Water
Analysis Batch: 76041

Client Sample ID: TMW-24
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1060		1091		mg/L		3	10

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

GC VOA

Analysis Batch: 76563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40975-1	TMW-14	Total/NA	Water	8021B	
880-40975-2	TMW-15	Total/NA	Water	8021B	
880-40975-3	TMW-16	Total/NA	Water	8021B	
880-40975-4	TMW-17	Total/NA	Water	8021B	
880-40975-5	TMW-18	Total/NA	Water	8021B	
880-40975-6	TMW-19	Total/NA	Water	8021B	
880-40975-7	TMW-20	Total/NA	Water	8021B	
880-40975-8	TMW-21	Total/NA	Water	8021B	
880-40975-9	TMW-22	Total/NA	Water	8021B	
880-40975-10	TMW-23	Total/NA	Water	8021B	
880-40975-11	TMW-24	Total/NA	Water	8021B	
880-40975-12	Dup-2	Total/NA	Water	8021B	
MB 880-76563/8	Method Blank	Total/NA	Water	8021B	
LCS 880-76563/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-76563/4	Lab Control Sample Dup	Total/NA	Water	8021B	
880-40975-1 MS	TMW-14	Total/NA	Water	8021B	
880-40975-1 MSD	TMW-14	Total/NA	Water	8021B	

Analysis Batch: 76704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40975-1	TMW-14	Total/NA	Water	Total BTEX	
880-40975-2	TMW-15	Total/NA	Water	Total BTEX	
880-40975-3	TMW-16	Total/NA	Water	Total BTEX	
880-40975-4	TMW-17	Total/NA	Water	Total BTEX	
880-40975-5	TMW-18	Total/NA	Water	Total BTEX	
880-40975-6	TMW-19	Total/NA	Water	Total BTEX	
880-40975-7	TMW-20	Total/NA	Water	Total BTEX	
880-40975-8	TMW-21	Total/NA	Water	Total BTEX	
880-40975-9	TMW-22	Total/NA	Water	Total BTEX	
880-40975-10	TMW-23	Total/NA	Water	Total BTEX	
880-40975-11	TMW-24	Total/NA	Water	Total BTEX	
880-40975-12	Dup-2	Total/NA	Water	Total BTEX	

HPLC/IC

Analysis Batch: 76122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40975-1	TMW-14	Total/NA	Water	300.0	
880-40975-2	TMW-15	Total/NA	Water	300.0	
880-40975-3	TMW-16	Total/NA	Water	300.0	
880-40975-4	TMW-17	Total/NA	Water	300.0	
880-40975-5	TMW-18	Total/NA	Water	300.0	
880-40975-6	TMW-19	Total/NA	Water	300.0	
880-40975-7	TMW-20	Total/NA	Water	300.0	
880-40975-8	TMW-21	Total/NA	Water	300.0	
880-40975-9	TMW-22	Total/NA	Water	300.0	
880-40975-10	TMW-23	Total/NA	Water	300.0	
MB 880-76122/3	Method Blank	Total/NA	Water	300.0	
LCS 880-76122/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-76122/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-40975-1 MS	TMW-14	Total/NA	Water	300.0	

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QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

HPLC/IC (Continued)

Analysis Batch: 76122 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40975-1 MSD	TMW-14	Total/NA	Water	300.0	

Analysis Batch: 76126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40975-11	TMW-24	Total/NA	Water	300.0	
880-40975-12	Dup-2	Total/NA	Water	300.0	
MB 880-76126/3	Method Blank	Total/NA	Water	300.0	
LCS 880-76126/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-76126/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-40975-11 MS	TMW-24	Total/NA	Water	300.0	
880-40975-11 MSD	TMW-24	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 76041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40975-1	TMW-14	Total/NA	Water	SM 2540C	
880-40975-2	TMW-15	Total/NA	Water	SM 2540C	
880-40975-3	TMW-16	Total/NA	Water	SM 2540C	
880-40975-4	TMW-17	Total/NA	Water	SM 2540C	
880-40975-5	TMW-18	Total/NA	Water	SM 2540C	
880-40975-6	TMW-19	Total/NA	Water	SM 2540C	
880-40975-7	TMW-20	Total/NA	Water	SM 2540C	
880-40975-8	TMW-21	Total/NA	Water	SM 2540C	
880-40975-9	TMW-22	Total/NA	Water	SM 2540C	
880-40975-10	TMW-23	Total/NA	Water	SM 2540C	
880-40975-11	TMW-24	Total/NA	Water	SM 2540C	
880-40975-12	Dup-2	Total/NA	Water	SM 2540C	
MB 880-76041/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 880-76041/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 880-76041/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
880-40975-1 DU	TMW-14	Total/NA	Water	SM 2540C	
880-40975-11 DU	TMW-24	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Client Sample ID: TMW-14
Date Collected: 03/15/24 09:09
Date Received: 03/18/24 09:00

Lab Sample ID: 880-40975-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	76563	03/26/24 12:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76704	03/26/24 12:18	SM	EET MID
Total/NA	Analysis	300.0		50	10 mL	10 mL	76122	03/20/24 17:19	SMC	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	76041	03/19/24 18:00	SMC	EET MID

Client Sample ID: TMW-15
Date Collected: 03/15/24 09:30
Date Received: 03/18/24 09:00

Lab Sample ID: 880-40975-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	76563	03/26/24 12:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76704	03/26/24 12:45	SM	EET MID
Total/NA	Analysis	300.0		50	10 mL	10 mL	76122	03/20/24 17:38	SMC	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	76041	03/19/24 18:00	SMC	EET MID

Client Sample ID: TMW-16
Date Collected: 03/15/24 10:15
Date Received: 03/18/24 09:00

Lab Sample ID: 880-40975-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	76563	03/26/24 13:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76704	03/26/24 13:12	SM	EET MID
Total/NA	Analysis	300.0		5	10 mL	10 mL	76122	03/20/24 17:44	SMC	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	76041	03/19/24 18:00	SMC	EET MID

Client Sample ID: TMW-17
Date Collected: 03/15/24 10:00
Date Received: 03/18/24 09:00

Lab Sample ID: 880-40975-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	76563	03/26/24 13:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76704	03/26/24 13:39	SM	EET MID
Total/NA	Analysis	300.0		50	10 mL	10 mL	76122	03/20/24 18:02	SMC	EET MID
Total/NA	Analysis	SM 2540C		1	10 mL	200 mL	76041	03/19/24 18:00	SMC	EET MID

Client Sample ID: TMW-18
Date Collected: 03/15/24 09:40
Date Received: 03/18/24 09:00

Lab Sample ID: 880-40975-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	76563	03/26/24 14:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76704	03/26/24 14:06	SM	EET MID
Total/NA	Analysis	300.0		20	10 mL	10 mL	76122	03/20/24 18:09	SMC	EET MID
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	76041	03/19/24 18:00	SMC	EET MID

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Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Client Sample ID: TMW-19
Date Collected: 03/15/24 10:35
Date Received: 03/18/24 09:00

Lab Sample ID: 880-40975-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	76563	03/26/24 14:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76704	03/26/24 14:32	SM	EET MID
Total/NA	Analysis	300.0		10	10 mL	10 mL	76122	03/20/24 18:15	SMC	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	76041	03/19/24 18:00	SMC	EET MID

Client Sample ID: TMW-20
Date Collected: 03/15/24 12:15
Date Received: 03/18/24 09:00

Lab Sample ID: 880-40975-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	76563	03/26/24 14:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76704	03/26/24 14:59	SM	EET MID
Total/NA	Analysis	300.0		10	10 mL	10 mL	76122	03/20/24 18:21	SMC	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	76041	03/19/24 18:00	SMC	EET MID

Client Sample ID: TMW-21
Date Collected: 03/15/24 12:29
Date Received: 03/18/24 09:00

Lab Sample ID: 880-40975-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	76563	03/26/24 15:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76704	03/26/24 15:26	SM	EET MID
Total/NA	Analysis	300.0		5	10 mL	10 mL	76122	03/20/24 18:27	SMC	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	76041	03/19/24 18:00	SMC	EET MID

Client Sample ID: TMW-22
Date Collected: 03/15/24 13:30
Date Received: 03/18/24 09:00

Lab Sample ID: 880-40975-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	76563	03/26/24 15:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76704	03/26/24 15:53	SM	EET MID
Total/NA	Analysis	300.0		10	10 mL	10 mL	76122	03/20/24 18:33	SMC	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	76041	03/19/24 18:00	SMC	EET MID

Client Sample ID: TMW-23
Date Collected: 03/15/24 12:00
Date Received: 03/18/24 09:00

Lab Sample ID: 880-40975-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	76563	03/26/24 16:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76704	03/26/24 16:20	SM	EET MID
Total/NA	Analysis	300.0		20	10 mL	10 mL	76122	03/20/24 18:39	SMC	EET MID
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	76041	03/19/24 18:00	SMC	EET MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Client Sample ID: TMW-24
Date Collected: 03/15/24 11:45
Date Received: 03/18/24 09:00

Lab Sample ID: 880-40975-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	76563	03/26/24 18:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76704	03/26/24 18:08	SM	EET MID
Total/NA	Analysis	300.0		10	10 mL	10 mL	76126	03/20/24 19:28	SMC	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	76041	03/19/24 18:00	SMC	EET MID

Client Sample ID: Dup-2
Date Collected: 03/15/24 00:00
Date Received: 03/18/24 09:00

Lab Sample ID: 880-40975-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	76563	03/26/24 18:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			76704	03/26/24 18:33	SM	EET MID
Total/NA	Analysis	300.0		20	10 mL	10 mL	76126	03/20/24 19:47	SMC	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	76041	03/19/24 18:00	SMC	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Water	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET MID
5030B	Purge and Trap	SW846	EET MID

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EDBU #37

Job ID: 880-40975-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-40975-1	TMW-14	Water	03/15/24 09:09	03/18/24 09:00
880-40975-2	TMW-15	Water	03/15/24 09:30	03/18/24 09:00
880-40975-3	TMW-16	Water	03/15/24 10:15	03/18/24 09:00
880-40975-4	TMW-17	Water	03/15/24 10:00	03/18/24 09:00
880-40975-5	TMW-18	Water	03/15/24 09:40	03/18/24 09:00
880-40975-6	TMW-19	Water	03/15/24 10:35	03/18/24 09:00
880-40975-7	TMW-20	Water	03/15/24 12:15	03/18/24 09:00
880-40975-8	TMW-21	Water	03/15/24 12:29	03/18/24 09:00
880-40975-9	TMW-22	Water	03/15/24 13:30	03/18/24 09:00
880-40975-10	TMW-23	Water	03/15/24 12:00	03/18/24 09:00
880-40975-11	TMW-24	Water	03/15/24 11:45	03/18/24 09:00
880-40975-12	Dup-2	Water	03/15/24 00:00	03/18/24 09:00

40915 No. 3285
CHAIN-OF-CUSTODY

[illegible]

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-40975-1
SDG Number: 19-0112-49

Login Number: 40975
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 1/2/2024 8:18:03 AM

JOB DESCRIPTION

EBDU #37
19-0112-49

JOB NUMBER

880-37226-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701



Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
1/2/2024 8:18:03 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Laboratory Job ID: 880-37226-1
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Qualifiers

GC VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project: EBDU #37

Job ID: 880-37226-1

Job ID: 880-37226-1

Eurofins Midland

Job Narrative 880-37226-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 12/21/2023 9:42 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 8.5°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: TMW-17 (880-37226-1), TMW-16 (880-37226-2), TMW-19 (880-37226-3), TMW-24 (880-37226-4), TMW-23 (880-37226-5), Windmill (880-37226-6), TMW-20 (880-37226-7), TMW-21 (880-37226-8), TMW-22 (880-37226-9), TMW-18 (880-37226-10), TMW-15 (880-37226-11), TMW-13 (880-37226-12), TMW-14 (880-37226-13), TMW-6 (880-37226-14), TMW-5 (880-37226-15), TMW-4 (880-37226-16), TMW-7 (880-37226-17), TMW-8 (880-37226-18) and Dup-1 (880-37226-19).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with analytical batch 880-69717 was outside the upper control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 880-69667 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: TMW-17

Lab Sample ID: 880-37226-1

Date Collected: 12/20/23 08:45

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F2	0.00200	mg/L			12/23/23 21:06	1
Toluene	<0.00200	U	0.00200	mg/L			12/23/23 21:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/23/23 21:06	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/23/23 21:06	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/23/23 21:06	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/23/23 21:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130		12/23/23 21:06	1
1,4-Difluorobenzene (Surr)	93		70 - 130		12/23/23 21:06	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/23/23 21:06	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5850		25.0	mg/L			12/23/23 00:07	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	10300		500	mg/L			12/22/23 12:48	1

Client Sample ID: TMW-16

Lab Sample ID: 880-37226-2

Date Collected: 12/20/23 08:59

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/23/23 21:32	1
Toluene	<0.00200	U	0.00200	mg/L			12/23/23 21:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/23/23 21:32	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/23/23 21:32	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/23/23 21:32	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/23/23 21:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130		12/23/23 21:32	1
1,4-Difluorobenzene (Surr)	111		70 - 130		12/23/23 21:32	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/23/23 21:32	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	85.5		2.50	mg/L			12/23/23 00:31	5

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	495		50.0	mg/L			12/22/23 12:48	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: TMW-19

Lab Sample ID: 880-37226-3

Date Collected: 12/20/23 09:20

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/23/23 21:58	1
Toluene	<0.00200	U	0.00200	mg/L			12/23/23 21:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/23/23 21:58	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/23/23 21:58	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/23/23 21:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/23/23 21:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130		12/23/23 21:58	1
1,4-Difluorobenzene (Surr)	90		70 - 130		12/23/23 21:58	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/23/23 21:58	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	927		10.0	mg/L			12/23/23 00:38	20

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1860		100	mg/L			12/22/23 12:48	1

Client Sample ID: TMW-24

Lab Sample ID: 880-37226-4

Date Collected: 12/20/23 09:35

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/23/23 22:24	1
Toluene	<0.00200	U	0.00200	mg/L			12/23/23 22:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/23/23 22:24	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/23/23 22:24	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/23/23 22:24	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/23/23 22:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130		12/23/23 22:24	1
1,4-Difluorobenzene (Surr)	71		70 - 130		12/23/23 22:24	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/23/23 22:24	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	271		5.00	mg/L			12/23/23 00:46	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1050		50.0	mg/L			12/22/23 12:48	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: TMW-23

Lab Sample ID: 880-37226-5

Date Collected: 12/20/23 09:45

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/23/23 22:51	1
Toluene	<0.00200	U	0.00200	mg/L			12/23/23 22:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/23/23 22:51	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/23/23 22:51	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/23/23 22:51	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/23/23 22:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130		12/23/23 22:51	1
1,4-Difluorobenzene (Surr)	90		70 - 130		12/23/23 22:51	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/23/23 22:51	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	895		10.0	mg/L			12/23/23 00:54	20

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1980		100	mg/L			12/22/23 12:48	1

Client Sample ID: Windmill

Lab Sample ID: 880-37226-6

Date Collected: 12/20/23 09:15

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/23/23 23:17	1
Toluene	<0.00200	U	0.00200	mg/L			12/23/23 23:17	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/23/23 23:17	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/23/23 23:17	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/23/23 23:17	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/23/23 23:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130		12/23/23 23:17	1
1,4-Difluorobenzene (Surr)	95		70 - 130		12/23/23 23:17	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/23/23 23:17	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	409		5.00	mg/L			12/23/23 01:18	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1010		50.0	mg/L			12/22/23 12:48	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: TMW-20

Lab Sample ID: 880-37226-7

Date Collected: 12/20/23 10:14

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/23/23 23:44	1
Toluene	<0.00200	U	0.00200	mg/L			12/23/23 23:44	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/23/23 23:44	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/23/23 23:44	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/23/23 23:44	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/23/23 23:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130		12/23/23 23:44	1
1,4-Difluorobenzene (Surr)	108		70 - 130		12/23/23 23:44	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/23/23 23:44	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	287		5.00	mg/L			12/23/23 01:26	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	927		50.0	mg/L			12/22/23 12:48	1

Client Sample ID: TMW-21

Lab Sample ID: 880-37226-8

Date Collected: 12/20/23 10:30

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/24/23 00:10	1
Toluene	<0.00200	U	0.00200	mg/L			12/24/23 00:10	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/24/23 00:10	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/24/23 00:10	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/24/23 00:10	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/24/23 00:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130		12/24/23 00:10	1
1,4-Difluorobenzene (Surr)	85		70 - 130		12/24/23 00:10	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/24/23 00:10	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	262		5.00	mg/L			12/23/23 01:33	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	885		50.0	mg/L			12/22/23 12:48	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: TMW-22

Lab Sample ID: 880-37226-9

Date Collected: 12/20/23 10:44

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/24/23 00:36	1
Toluene	<0.00200	U	0.00200	mg/L			12/24/23 00:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/24/23 00:36	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/24/23 00:36	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/24/23 00:36	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/24/23 00:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130		12/24/23 00:36	1
1,4-Difluorobenzene (Surr)	74		70 - 130		12/24/23 00:36	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/24/23 00:36	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	270		5.00	mg/L			12/23/23 01:41	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	939		50.0	mg/L			12/22/23 12:48	1

Client Sample ID: TMW-18

Lab Sample ID: 880-37226-10

Date Collected: 12/20/23 11:25

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/24/23 01:03	1
Toluene	<0.00200	U	0.00200	mg/L			12/24/23 01:03	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/24/23 01:03	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/24/23 01:03	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/24/23 01:03	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/24/23 01:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130		12/24/23 01:03	1
1,4-Difluorobenzene (Surr)	103		70 - 130		12/24/23 01:03	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/24/23 01:03	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2050		25.0	mg/L			12/23/23 01:49	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	6430		200	mg/L			12/22/23 12:48	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: TMW-15
Date Collected: 12/20/23 11:42
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-11
Matrix: Water

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/24/23 02:48	1
Toluene	<0.00200	U	0.00200	mg/L			12/24/23 02:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/24/23 02:48	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/24/23 02:48	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/24/23 02:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/24/23 02:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130				12/24/23 02:48	1
1,4-Difluorobenzene (Surr)	70		70 - 130				12/24/23 02:48	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/24/23 02:48	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2120	F1	25.0	mg/L			12/23/23 01:57	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3870		200	mg/L			12/22/23 12:48	1

Client Sample ID: TMW-13
Date Collected: 12/20/23 12:16
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-12
Matrix: Water

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/24/23 03:15	1
Toluene	<0.00200	U	0.00200	mg/L			12/24/23 03:15	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/24/23 03:15	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/24/23 03:15	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/24/23 03:15	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/24/23 03:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130				12/24/23 03:15	1
1,4-Difluorobenzene (Surr)	68	S1-	70 - 130				12/24/23 03:15	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/24/23 03:15	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1730		25.0	mg/L			12/23/23 02:20	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3680		200	mg/L			12/22/23 12:48	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: TMW-14

Lab Sample ID: 880-37226-13

Date Collected: 12/20/23 12:00

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/24/23 03:41	1
Toluene	<0.00200	U	0.00200	mg/L			12/24/23 03:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/24/23 03:41	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/24/23 03:41	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/24/23 03:41	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/24/23 03:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130		12/24/23 03:41	1
1,4-Difluorobenzene (Surr)	118		70 - 130		12/24/23 03:41	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/24/23 03:41	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2500		25.0	mg/L			12/23/23 02:28	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	5140		200	mg/L			12/22/23 12:48	1

Client Sample ID: TMW-6

Lab Sample ID: 880-37226-14

Date Collected: 12/20/23 12:30

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/24/23 04:08	1
Toluene	<0.00200	U	0.00200	mg/L			12/24/23 04:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/24/23 04:08	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/24/23 04:08	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/24/23 04:08	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/24/23 04:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130		12/24/23 04:08	1
1,4-Difluorobenzene (Surr)	85		70 - 130		12/24/23 04:08	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/24/23 04:08	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1570		25.0	mg/L			12/23/23 02:52	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3070		200	mg/L			12/22/23 12:48	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: TMW-5

Lab Sample ID: 880-37226-15

Date Collected: 12/20/23 12:43

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/24/23 04:34	1
Toluene	<0.00200	U	0.00200	mg/L			12/24/23 04:34	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/24/23 04:34	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/24/23 04:34	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/24/23 04:34	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/24/23 04:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130		12/24/23 04:34	1
1,4-Difluorobenzene (Surr)	100		70 - 130		12/24/23 04:34	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/24/23 04:34	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2320		25.0	mg/L			12/23/23 03:00	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	4250		200	mg/L			12/22/23 12:48	1

Client Sample ID: TMW-4

Lab Sample ID: 880-37226-16

Date Collected: 12/20/23 13:00

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/24/23 05:01	1
Toluene	<0.00200	U	0.00200	mg/L			12/24/23 05:01	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/24/23 05:01	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/24/23 05:01	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/24/23 05:01	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/24/23 05:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130		12/24/23 05:01	1
1,4-Difluorobenzene (Surr)	121		70 - 130		12/24/23 05:01	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/24/23 05:01	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	598		10.0	mg/L			12/23/23 03:08	20

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1750		100	mg/L			12/22/23 12:48	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: TMW-7

Lab Sample ID: 880-37226-17

Date Collected: 12/20/23 13:13

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/24/23 05:27	1
Toluene	<0.00200	U	0.00200	mg/L			12/24/23 05:27	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/24/23 05:27	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/24/23 05:27	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/24/23 05:27	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/24/23 05:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130		12/24/23 05:27	1
1,4-Difluorobenzene (Surr)	94		70 - 130		12/24/23 05:27	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/24/23 05:27	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1770		25.0	mg/L			12/23/23 03:16	50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3720		200	mg/L			12/22/23 12:48	1

Client Sample ID: TMW-8

Lab Sample ID: 880-37226-18

Date Collected: 12/20/23 13:32

Matrix: Water

Date Received: 12/21/23 09:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/24/23 05:54	1
Toluene	<0.00200	U	0.00200	mg/L			12/24/23 05:54	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/24/23 05:54	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/24/23 05:54	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/24/23 05:54	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/24/23 05:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130		12/24/23 05:54	1
1,4-Difluorobenzene (Surr)	98		70 - 130		12/24/23 05:54	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/L			12/24/23 05:54	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	709		10.0	mg/L			12/23/23 03:23	20

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1840		100	mg/L			12/22/23 12:48	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: Dup-1
Date Collected: 12/20/23 00:00
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-19
Matrix: Water

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/L			12/24/23 06:20	1	
Toluene	<0.00200	U	0.00200	mg/L			12/24/23 06:20	1	
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/24/23 06:20	1	
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/24/23 06:20	1	
o-Xylene	<0.00200	U	0.00200	mg/L			12/24/23 06:20	1	
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/24/23 06:20	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	116		70 - 130				12/24/23 06:20	1	
1,4-Difluorobenzene (Surr)	102		70 - 130				12/24/23 06:20	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00400	U	0.00400	mg/L			12/24/23 06:20	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	5830		25.0	mg/L			12/23/23 03:31	50	
General Chemistry									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total Dissolved Solids (SM 2540C)	10300		500	mg/L			12/22/23 12:48	1	

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Method: 8021B - Volatile Organic Compounds (GC)
Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-37226-1	TMW-17	92	93
880-37226-1 MS	TMW-17	129	113
880-37226-1 MSD	TMW-17	108	111
880-37226-2	TMW-16	120	111
880-37226-3	TMW-19	95	90
880-37226-4	TMW-24	129	71
880-37226-5	TMW-23	108	90
880-37226-6	Windmill	114	95
880-37226-7	TMW-20	112	108
880-37226-8	TMW-21	107	85
880-37226-9	TMW-22	96	74
880-37226-10	TMW-18	121	103
880-37226-11	TMW-15	81	70
880-37226-12	TMW-13	123	68 S1-
880-37226-13	TMW-14	113	118
880-37226-14	TMW-6	103	85
880-37226-15	TMW-5	119	100
880-37226-16	TMW-4	114	121
880-37226-17	TMW-7	112	94
880-37226-18	TMW-8	101	98
880-37226-19	Dup-1	116	102
LCS 880-69717/3	Lab Control Sample	100	95
LCSD 880-69717/4	Lab Control Sample Dup	121	108
MB 880-69717/8	Method Blank	60 S1-	88

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-69717/8

Matrix: Water

Analysis Batch: 69717

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L			12/23/23 20:40	1
Toluene	<0.00200	U	0.00200	mg/L			12/23/23 20:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/L			12/23/23 20:40	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L			12/23/23 20:40	1
o-Xylene	<0.00200	U	0.00200	mg/L			12/23/23 20:40	1
Xylenes, Total	<0.00400	U	0.00400	mg/L			12/23/23 20:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	60	S1-	70 - 130		12/23/23 20:40	1
1,4-Difluorobenzene (Surr)	88		70 - 130		12/23/23 20:40	1

Lab Sample ID: LCS 880-69717/3

Matrix: Water

Analysis Batch: 69717

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.07869		mg/L		79	70 - 130
Toluene	0.100	0.07281		mg/L		73	70 - 130
Ethylbenzene	0.100	0.07420		mg/L		74	70 - 130
m,p-Xylenes	0.200	0.1528		mg/L		76	70 - 130
o-Xylene	0.100	0.07922		mg/L		79	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: LCSD 880-69717/4

Matrix: Water

Analysis Batch: 69717

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08671		mg/L		87	70 - 130	10	20
Toluene	0.100	0.08545		mg/L		85	70 - 130	16	20
Ethylbenzene	0.100	0.09013		mg/L		90	70 - 130	19	20
m,p-Xylenes	0.200	0.1740		mg/L		87	70 - 130	13	20
o-Xylene	0.100	0.08666		mg/L		87	70 - 130	9	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	121		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: 880-37226-1 MS

Matrix: Water

Analysis Batch: 69717

Client Sample ID: TMW-17

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F2	0.100	0.1037		mg/L		104	70 - 130
Toluene	<0.00200	U	0.100	0.08379		mg/L		84	70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-37226-1 MS

Client Sample ID: TMW-17

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 69717

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.09322		mg/L		93	70 - 130
m,p-Xylenes	<0.00400	U	0.200	0.1651		mg/L		83	70 - 130
o-Xylene	<0.00200	U	0.100	0.1004		mg/L		100	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	129		70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

Lab Sample ID: 880-37226-1 MSD

Client Sample ID: TMW-17

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 69717

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F2	0.100	0.07590	F2	mg/L		76	70 - 130	31	25
Toluene	<0.00200	U	0.100	0.08334		mg/L		83	70 - 130	1	25
Ethylbenzene	<0.00200	U	0.100	0.08083		mg/L		81	70 - 130	14	25
m,p-Xylenes	<0.00400	U	0.200	0.1639		mg/L		82	70 - 130	1	25
o-Xylene	<0.00200	U	0.100	0.08708		mg/L		87	70 - 130	14	25

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-69667/3

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 69667

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			12/22/23 23:43	1

Lab Sample ID: LCS 880-69667/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 69667

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	23.63		mg/L		95	90 - 110

Lab Sample ID: LCSD 880-69667/5

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 69667

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	23.60		mg/L		94	90 - 110	0	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-37226-1 MS
Matrix: Water
Analysis Batch: 69667

Client Sample ID: TMW-17
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	5850		1250	6811	4	mg/L		77	90 - 110		

Lab Sample ID: 880-37226-1 MSD
Matrix: Water
Analysis Batch: 69667

Client Sample ID: TMW-17
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	5850		1250	6795	4	mg/L		76	90 - 110	0	20

Lab Sample ID: 880-37226-11 MS
Matrix: Water
Analysis Batch: 69667

Client Sample ID: TMW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	2120	F1	1250	3322		mg/L		97	90 - 110		

Lab Sample ID: 880-37226-11 MSD
Matrix: Water
Analysis Batch: 69667

Client Sample ID: TMW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2120	F1	1250	3195	F1	mg/L		86	90 - 110	4	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 880-69658/1
Matrix: Water
Analysis Batch: 69658

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<25.0	U	25.0	mg/L			12/22/23 12:48	1

Lab Sample ID: LCS 880-69658/2
Matrix: Water
Analysis Batch: 69658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids	1000	970.0		mg/L		97	80 - 120		

Lab Sample ID: LCSD 880-69658/3
Matrix: Water
Analysis Batch: 69658

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	985.0		mg/L		99	80 - 120	2	10

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 880-37226-1 DU
Matrix: Water
Analysis Batch: 69658

Client Sample ID: TMW-17
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	10300		10340		mg/L		0.6	10

Lab Sample ID: 880-37226-11 DU
Matrix: Water
Analysis Batch: 69658

Client Sample ID: TMW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	3870		3948		mg/L		2	10

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

GC VOA

Analysis Batch: 69717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37226-1	TMW-17	Total/NA	Water	8021B	
880-37226-2	TMW-16	Total/NA	Water	8021B	
880-37226-3	TMW-19	Total/NA	Water	8021B	
880-37226-4	TMW-24	Total/NA	Water	8021B	
880-37226-5	TMW-23	Total/NA	Water	8021B	
880-37226-6	Windmill	Total/NA	Water	8021B	
880-37226-7	TMW-20	Total/NA	Water	8021B	
880-37226-8	TMW-21	Total/NA	Water	8021B	
880-37226-9	TMW-22	Total/NA	Water	8021B	
880-37226-10	TMW-18	Total/NA	Water	8021B	
880-37226-11	TMW-15	Total/NA	Water	8021B	
880-37226-12	TMW-13	Total/NA	Water	8021B	
880-37226-13	TMW-14	Total/NA	Water	8021B	
880-37226-14	TMW-6	Total/NA	Water	8021B	
880-37226-15	TMW-5	Total/NA	Water	8021B	
880-37226-16	TMW-4	Total/NA	Water	8021B	
880-37226-17	TMW-7	Total/NA	Water	8021B	
880-37226-18	TMW-8	Total/NA	Water	8021B	
880-37226-19	Dup-1	Total/NA	Water	8021B	
MB 880-69717/8	Method Blank	Total/NA	Water	8021B	
LCS 880-69717/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-69717/4	Lab Control Sample Dup	Total/NA	Water	8021B	
880-37226-1 MS	TMW-17	Total/NA	Water	8021B	
880-37226-1 MSD	TMW-17	Total/NA	Water	8021B	

Analysis Batch: 69798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37226-1	TMW-17	Total/NA	Water	Total BTEX	
880-37226-2	TMW-16	Total/NA	Water	Total BTEX	
880-37226-3	TMW-19	Total/NA	Water	Total BTEX	
880-37226-4	TMW-24	Total/NA	Water	Total BTEX	
880-37226-5	TMW-23	Total/NA	Water	Total BTEX	
880-37226-6	Windmill	Total/NA	Water	Total BTEX	
880-37226-7	TMW-20	Total/NA	Water	Total BTEX	
880-37226-8	TMW-21	Total/NA	Water	Total BTEX	
880-37226-9	TMW-22	Total/NA	Water	Total BTEX	
880-37226-10	TMW-18	Total/NA	Water	Total BTEX	
880-37226-11	TMW-15	Total/NA	Water	Total BTEX	
880-37226-12	TMW-13	Total/NA	Water	Total BTEX	
880-37226-13	TMW-14	Total/NA	Water	Total BTEX	
880-37226-14	TMW-6	Total/NA	Water	Total BTEX	
880-37226-15	TMW-5	Total/NA	Water	Total BTEX	
880-37226-16	TMW-4	Total/NA	Water	Total BTEX	
880-37226-17	TMW-7	Total/NA	Water	Total BTEX	
880-37226-18	TMW-8	Total/NA	Water	Total BTEX	
880-37226-19	Dup-1	Total/NA	Water	Total BTEX	

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QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

HPLC/IC

Analysis Batch: 69667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37226-1	TMW-17	Total/NA	Water	300.0	
880-37226-2	TMW-16	Total/NA	Water	300.0	
880-37226-3	TMW-19	Total/NA	Water	300.0	
880-37226-4	TMW-24	Total/NA	Water	300.0	
880-37226-5	TMW-23	Total/NA	Water	300.0	
880-37226-6	Windmill	Total/NA	Water	300.0	
880-37226-7	TMW-20	Total/NA	Water	300.0	
880-37226-8	TMW-21	Total/NA	Water	300.0	
880-37226-9	TMW-22	Total/NA	Water	300.0	
880-37226-10	TMW-18	Total/NA	Water	300.0	
880-37226-11	TMW-15	Total/NA	Water	300.0	
880-37226-12	TMW-13	Total/NA	Water	300.0	
880-37226-13	TMW-14	Total/NA	Water	300.0	
880-37226-14	TMW-6	Total/NA	Water	300.0	
880-37226-15	TMW-5	Total/NA	Water	300.0	
880-37226-16	TMW-4	Total/NA	Water	300.0	
880-37226-17	TMW-7	Total/NA	Water	300.0	
880-37226-18	TMW-8	Total/NA	Water	300.0	
880-37226-19	Dup-1	Total/NA	Water	300.0	
MB 880-69667/3	Method Blank	Total/NA	Water	300.0	
LCS 880-69667/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-69667/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-37226-1 MS	TMW-17	Total/NA	Water	300.0	
880-37226-1 MSD	TMW-17	Total/NA	Water	300.0	
880-37226-11 MS	TMW-15	Total/NA	Water	300.0	
880-37226-11 MSD	TMW-15	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 69658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37226-1	TMW-17	Total/NA	Water	SM 2540C	
880-37226-2	TMW-16	Total/NA	Water	SM 2540C	
880-37226-3	TMW-19	Total/NA	Water	SM 2540C	
880-37226-4	TMW-24	Total/NA	Water	SM 2540C	
880-37226-5	TMW-23	Total/NA	Water	SM 2540C	
880-37226-6	Windmill	Total/NA	Water	SM 2540C	
880-37226-7	TMW-20	Total/NA	Water	SM 2540C	
880-37226-8	TMW-21	Total/NA	Water	SM 2540C	
880-37226-9	TMW-22	Total/NA	Water	SM 2540C	
880-37226-10	TMW-18	Total/NA	Water	SM 2540C	
880-37226-11	TMW-15	Total/NA	Water	SM 2540C	
880-37226-12	TMW-13	Total/NA	Water	SM 2540C	
880-37226-13	TMW-14	Total/NA	Water	SM 2540C	
880-37226-14	TMW-6	Total/NA	Water	SM 2540C	
880-37226-15	TMW-5	Total/NA	Water	SM 2540C	
880-37226-16	TMW-4	Total/NA	Water	SM 2540C	
880-37226-17	TMW-7	Total/NA	Water	SM 2540C	
880-37226-18	TMW-8	Total/NA	Water	SM 2540C	
880-37226-19	Dup-1	Total/NA	Water	SM 2540C	
MB 880-69658/1	Method Blank	Total/NA	Water	SM 2540C	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

General Chemistry (Continued)

Analysis Batch: 69658 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-69658/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 880-69658/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
880-37226-1 DU	TMW-17	Total/NA	Water	SM 2540C	
880-37226-11 DU	TMW-15	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: TMW-17
Date Collected: 12/20/23 08:45
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/23/23 21:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/23/23 21:06	AJ	EET MID
Total/NA	Analysis	300.0		50	50 mL	50 mL	69667	12/23/23 00:07	CH	EET MID
Total/NA	Analysis	SM 2540C		1	10 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-16
Date Collected: 12/20/23 08:59
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/23/23 21:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/23/23 21:32	AJ	EET MID
Total/NA	Analysis	300.0		5	50 mL	50 mL	69667	12/23/23 00:31	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-19
Date Collected: 12/20/23 09:20
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/23/23 21:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/23/23 21:58	AJ	EET MID
Total/NA	Analysis	300.0		20	50 mL	50 mL	69667	12/23/23 00:38	CH	EET MID
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-24
Date Collected: 12/20/23 09:35
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/23/23 22:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/23/23 22:24	AJ	EET MID
Total/NA	Analysis	300.0		10	50 mL	50 mL	69667	12/23/23 00:46	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-23
Date Collected: 12/20/23 09:45
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/23/23 22:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/23/23 22:51	AJ	EET MID
Total/NA	Analysis	300.0		20	50 mL	50 mL	69667	12/23/23 00:54	CH	EET MID
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: Windmill
Date Collected: 12/20/23 09:15
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/23/23 23:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/23/23 23:17	AJ	EET MID
Total/NA	Analysis	300.0		10	50 mL	50 mL	69667	12/23/23 01:18	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-20
Date Collected: 12/20/23 10:14
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/23/23 23:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/23/23 23:44	AJ	EET MID
Total/NA	Analysis	300.0		10	50 mL	50 mL	69667	12/23/23 01:26	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-21
Date Collected: 12/20/23 10:30
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/24/23 00:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/24/23 00:10	AJ	EET MID
Total/NA	Analysis	300.0		10	50 mL	50 mL	69667	12/23/23 01:33	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-22
Date Collected: 12/20/23 10:44
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/24/23 00:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/24/23 00:36	AJ	EET MID
Total/NA	Analysis	300.0		10	50 mL	50 mL	69667	12/23/23 01:41	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-18
Date Collected: 12/20/23 11:25
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/24/23 01:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/24/23 01:03	AJ	EET MID
Total/NA	Analysis	300.0		50	50 mL	50 mL	69667	12/23/23 01:49	CH	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: TMW-15
Date Collected: 12/20/23 11:42
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/24/23 02:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/24/23 02:48	AJ	EET MID
Total/NA	Analysis	300.0		50	50 mL	50 mL	69667	12/23/23 01:57	CH	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-13
Date Collected: 12/20/23 12:16
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/24/23 03:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/24/23 03:15	AJ	EET MID
Total/NA	Analysis	300.0		50	50 mL	50 mL	69667	12/23/23 02:20	CH	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-14
Date Collected: 12/20/23 12:00
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/24/23 03:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/24/23 03:41	AJ	EET MID
Total/NA	Analysis	300.0		50	50 mL	50 mL	69667	12/23/23 02:28	CH	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-6
Date Collected: 12/20/23 12:30
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/24/23 04:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/24/23 04:08	AJ	EET MID
Total/NA	Analysis	300.0		50	50 mL	50 mL	69667	12/23/23 02:52	CH	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-5
Date Collected: 12/20/23 12:43
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/24/23 04:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/24/23 04:34	AJ	EET MID
Total/NA	Analysis	300.0		50	50 mL	50 mL	69667	12/23/23 03:00	CH	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Client Sample ID: TMW-4
Date Collected: 12/20/23 13:00
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/24/23 05:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/24/23 05:01	AJ	EET MID
Total/NA	Analysis	300.0		20	50 mL	50 mL	69667	12/23/23 03:08	CH	EET MID
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-7
Date Collected: 12/20/23 13:13
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-17
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/24/23 05:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/24/23 05:27	AJ	EET MID
Total/NA	Analysis	300.0		50	50 mL	50 mL	69667	12/23/23 03:16	CH	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: TMW-8
Date Collected: 12/20/23 13:32
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-18
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/24/23 05:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/24/23 05:54	AJ	EET MID
Total/NA	Analysis	300.0		20	50 mL	50 mL	69667	12/23/23 03:23	CH	EET MID
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Client Sample ID: Dup-1
Date Collected: 12/20/23 00:00
Date Received: 12/21/23 09:42

Lab Sample ID: 880-37226-19
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	69717	12/24/23 06:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			69798	12/24/23 06:20	AJ	EET MID
Total/NA	Analysis	300.0		50	50 mL	50 mL	69667	12/23/23 03:31	CH	EET MID
Total/NA	Analysis	SM 2540C		1	10 mL	200 mL	69658	12/22/23 12:48	SMC	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Water	Total BTEX

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET MID
5030B	Purge and Trap	SW846	EET MID

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37226-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-37226-1	TMW-17	Water	12/20/23 08:45	12/21/23 09:42
880-37226-2	TMW-16	Water	12/20/23 08:59	12/21/23 09:42
880-37226-3	TMW-19	Water	12/20/23 09:20	12/21/23 09:42
880-37226-4	TMW-24	Water	12/20/23 09:35	12/21/23 09:42
880-37226-5	TMW-23	Water	12/20/23 09:45	12/21/23 09:42
880-37226-6	Windmill	Water	12/20/23 09:15	12/21/23 09:42
880-37226-7	TMW-20	Water	12/20/23 10:14	12/21/23 09:42
880-37226-8	TMW-21	Water	12/20/23 10:30	12/21/23 09:42
880-37226-9	TMW-22	Water	12/20/23 10:44	12/21/23 09:42
880-37226-10	TMW-18	Water	12/20/23 11:25	12/21/23 09:42
880-37226-11	TMW-15	Water	12/20/23 11:42	12/21/23 09:42
880-37226-12	TMW-13	Water	12/20/23 12:16	12/21/23 09:42
880-37226-13	TMW-14	Water	12/20/23 12:00	12/21/23 09:42
880-37226-14	TMW-6	Water	12/20/23 12:30	12/21/23 09:42
880-37226-15	TMW-5	Water	12/20/23 12:43	12/21/23 09:42
880-37226-16	TMW-4	Water	12/20/23 13:00	12/21/23 09:42
880-37226-17	TMW-7	Water	12/20/23 13:13	12/21/23 09:42
880-37226-18	TMW-8	Water	12/20/23 13:32	12/21/23 09:42
880-37226-19	Dup-1	Water	12/20/23 00:00	12/21/23 09:42

- 1
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- 11
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- 14

37226 No. 2884
CHAIN-OF-CUSTODY

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Larson & Associates, Inc.
Environmental Consultants

507 N. Marientfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to Mark Larson / Robert Nelson

DATE 12/26/23 PAGE 2 OF 2
PO# _____ LAB WORK ORDER# _____
PROJECT LOCATION OR NAME EADu #37
LAI PROJECT # 19-6112-44 COLLECTOR 200 AS

37226 No. 2885
CHAIN-OF-CUSTODY

TRRP report?
☐ Yes ☒ No

S=SOIL
W=WATER
A=AIR

P=PAINT
SL=SLUDGE
OT=OTHER

TIME ZONE
Time zone/State

MST/NA

Field
Sample ID

Lab #

Date

Time

Matrix

of Containers

HCl

HNO₃

H₂SO₄ ☐ NaOH ☐

ICE

UNPRESERVED

PRESERVATION

ANALYSES

BTEX ☐

TRPH 418 ☐

TPH 1005 ☐

TPH 1006 ☐

GASOLINE MOD 8015 ☐

DIESEL - MOD 8015 ☐

OIL - MOD 8015 ☐

VOC 8260 ☐

SVOC 8270 ☐

PAH 8270 ☐

8081 PESTICIDES ☐

8082 PESTICIDES ☐

TCLP - METALS (RCRA) ☐

TCLP - PEST ☐

TOTAL METALS (RCRA) ☐

LEAD - TOTAL ☐

RO ☐

TOX ☐

TDS ☐

PH ☐

% MOISTURE ☐

HEXAVALENT CHROMIUM ☐

PECHLORATE ☐

EXPLOSIVES ☐

CHLORIDES ☐

ANIONS ☐

ALKALINITY ☐

FIELD NOTES

Direct Bill to

Apache

37226

Loc: 880

37226

TOTAL

RELINQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

RELINQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

LABORATORY

TURN AROUND TIME

NORMAL ☒

1 DAY ☐

2 DAY ☐

OTHER ☐

LABORATORY USE ONLY

RECEIVING TEMP

8.3/85

THERM#

CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED

CARRIER BILL #

HAND DELIVERED

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-37226-1
SDG Number: 19-0112-49

Login Number: 37226
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 1/2/2024 12:48:10 PM

JOB DESCRIPTION

EBDU #37
19-0112-49

JOB NUMBER

880-37238-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701



Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
1/2/2024 12:48:10 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Laboratory Job ID: 880-37238-1
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
⬤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project: EBDU #37

Job ID: 880-37238-1

Job ID: 880-37238-1

Eurofins Midland

Job Narrative 880-37238-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 12/21/2023 1:49 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.5°C

GC/MS VOA

Method 8260C: Internal standard (ISTD) response for 1,4-Dichlorobenzene-d4 for the following samples in analytical batch 860-136702 was outside acceptance criteria: TMW-10 (880-37238-1), TMW-1 (880-37238-2) and TMW-9 (880-37238-3). This ISTD does not correspond to any of the requested target compounds reported from this analytical batch; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Client Sample ID: TMW-10

Lab Sample ID: 880-37238-1

Date Collected: 12/21/23 08:35

Matrix: Water

Date Received: 12/21/23 13:49

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100	mg/L			12/27/23 12:32	1
Toluene	<0.00100	U	0.00100	mg/L			12/27/23 12:32	1
Ethylbenzene	<0.00100	U	0.00100	mg/L			12/27/23 12:32	1
m,p-Xylenes	<0.0100	U	0.0100	mg/L			12/27/23 12:32	1
o-Xylene	<0.00100	U	0.00100	mg/L			12/27/23 12:32	1
Xylenes, Total	<0.0100	U	0.0100	mg/L			12/27/23 12:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		63 - 144		12/27/23 12:32	1
4-Bromofluorobenzene (Surr)	123	*3	74 - 124		12/27/23 12:32	1
Dibromofluoromethane (Surr)	102		75 - 131		12/27/23 12:32	1
Toluene-d8 (Surr)	120		80 - 120		12/27/23 12:32	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0100	U	0.0100	mg/L			12/27/23 12:32	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	114		0.500	mg/L			12/23/23 07:45	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	666		10.0	mg/L			12/26/23 17:40	1

Client Sample ID: TMW-1

Lab Sample ID: 880-37238-2

Date Collected: 12/21/23 08:58

Matrix: Water

Date Received: 12/21/23 13:49

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100	mg/L			12/27/23 12:53	1
Toluene	<0.00100	U	0.00100	mg/L			12/27/23 12:53	1
Ethylbenzene	<0.00100	U	0.00100	mg/L			12/27/23 12:53	1
m,p-Xylenes	<0.0100	U	0.0100	mg/L			12/27/23 12:53	1
o-Xylene	<0.00100	U	0.00100	mg/L			12/27/23 12:53	1
Xylenes, Total	<0.0100	U	0.0100	mg/L			12/27/23 12:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		63 - 144		12/27/23 12:53	1
4-Bromofluorobenzene (Surr)	121	*3	74 - 124		12/27/23 12:53	1
Dibromofluoromethane (Surr)	101		75 - 131		12/27/23 12:53	1
Toluene-d8 (Surr)	119		80 - 120		12/27/23 12:53	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0100	U	0.0100	mg/L			12/27/23 12:53	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	156		0.500	mg/L			12/23/23 07:58	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Client Sample ID: TMW-1

Lab Sample ID: 880-37238-2

Date Collected: 12/21/23 08:58

Matrix: Water

Date Received: 12/21/23 13:49

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	662		10.0	mg/L			12/26/23 17:40	1

Client Sample ID: TMW-9

Lab Sample ID: 880-37238-3

Date Collected: 12/21/23 09:26

Matrix: Water

Date Received: 12/21/23 13:49

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100	mg/L			12/27/23 13:13	1
Toluene	<0.00100	U	0.00100	mg/L			12/27/23 13:13	1
Ethylbenzene	<0.00100	U	0.00100	mg/L			12/27/23 13:13	1
m,p-Xylenes	<0.0100	U	0.0100	mg/L			12/27/23 13:13	1
o-Xylene	<0.00100	U	0.00100	mg/L			12/27/23 13:13	1
Xylenes, Total	<0.0100	U	0.0100	mg/L			12/27/23 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		63 - 144		12/27/23 13:13	1
4-Bromofluorobenzene (Surr)	125	S1+ *3	74 - 124		12/27/23 13:13	1
Dibromofluoromethane (Surr)	101		75 - 131		12/27/23 13:13	1
Toluene-d8 (Surr)	117		80 - 120		12/27/23 13:13	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0100	U	0.0100	mg/L			12/27/23 13:13	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.3		0.500	mg/L			12/23/23 08:10	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	404		10.0	mg/L			12/26/23 17:40	1

Client Sample ID: TMW-3

Lab Sample ID: 880-37238-4

Date Collected: 12/21/23 09:36

Matrix: Water

Date Received: 12/21/23 13:49

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100	mg/L			12/28/23 15:48	1
Toluene	<0.00100	U	0.00100	mg/L			12/28/23 15:48	1
Ethylbenzene	<0.00100	U	0.00100	mg/L			12/28/23 15:48	1
m,p-Xylenes	<0.0100	U	0.0100	mg/L			12/28/23 15:48	1
o-Xylene	<0.00100	U	0.00100	mg/L			12/28/23 15:48	1
Xylenes, Total	<0.0100	U	0.0100	mg/L			12/28/23 15:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		63 - 144		12/28/23 15:48	1
4-Bromofluorobenzene (Surr)	89		74 - 124		12/28/23 15:48	1
Dibromofluoromethane (Surr)	105		75 - 131		12/28/23 15:48	1
Toluene-d8 (Surr)	99		80 - 120		12/28/23 15:48	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Client Sample ID: TMW-3

Lab Sample ID: 880-37238-4

Date Collected: 12/21/23 09:36

Matrix: Water

Date Received: 12/21/23 13:49

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0100	U	0.0100	mg/L			12/28/23 15:48	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	242		0.500	mg/L			12/23/23 08:23	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1020		10.0	mg/L			12/26/23 17:40	1

Client Sample ID: TMW-2

Lab Sample ID: 880-37238-5

Date Collected: 12/21/23 09:56

Matrix: Water

Date Received: 12/21/23 13:49

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100	mg/L			12/28/23 16:09	1
Toluene	<0.00100	U	0.00100	mg/L			12/28/23 16:09	1
Ethylbenzene	<0.00100	U	0.00100	mg/L			12/28/23 16:09	1
m,p-Xylenes	<0.0100	U	0.0100	mg/L			12/28/23 16:09	1
o-Xylene	<0.00100	U	0.00100	mg/L			12/28/23 16:09	1
Xylenes, Total	<0.0100	U	0.0100	mg/L			12/28/23 16:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		63 - 144		12/28/23 16:09	1
4-Bromofluorobenzene (Surr)	88		74 - 124		12/28/23 16:09	1
Dibromofluoromethane (Surr)	100		75 - 131		12/28/23 16:09	1
Toluene-d8 (Surr)	100		80 - 120		12/28/23 16:09	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0100	U	0.0100	mg/L			12/28/23 16:09	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	264		0.500	mg/L			12/23/23 08:35	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1100		10.0	mg/L			12/26/23 17:40	1

Client Sample ID: TMW-11

Lab Sample ID: 880-37238-6

Date Collected: 12/21/23 10:11

Matrix: Water

Date Received: 12/21/23 13:49

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100	mg/L			12/28/23 16:30	1
Toluene	<0.00100	U	0.00100	mg/L			12/28/23 16:30	1
Ethylbenzene	<0.00100	U	0.00100	mg/L			12/28/23 16:30	1
m,p-Xylenes	<0.0100	U	0.0100	mg/L			12/28/23 16:30	1
o-Xylene	<0.00100	U	0.00100	mg/L			12/28/23 16:30	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Client Sample ID: TMW-11

Lab Sample ID: 880-37238-6

Date Collected: 12/21/23 10:11

Matrix: Water

Date Received: 12/21/23 13:49

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.0100	U	0.0100	mg/L			12/28/23 16:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		63 - 144				12/28/23 16:30	1
4-Bromofluorobenzene (Surr)	89		74 - 124				12/28/23 16:30	1
Dibromofluoromethane (Surr)	99		75 - 131				12/28/23 16:30	1
Toluene-d8 (Surr)	100		80 - 120				12/28/23 16:30	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0100	U	0.0100	mg/L			12/28/23 16:30	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	350		0.500	mg/L			12/23/23 08:48	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1190		10.0	mg/L			12/26/23 17:40	1

Client Sample ID: TMW-12

Lab Sample ID: 880-37238-7

Date Collected: 12/21/23 10:29

Matrix: Water

Date Received: 12/21/23 13:49

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100	mg/L			12/28/23 16:50	1
Toluene	<0.00100	U	0.00100	mg/L			12/28/23 16:50	1
Ethylbenzene	<0.00100	U	0.00100	mg/L			12/28/23 16:50	1
m,p-Xylenes	<0.0100	U	0.0100	mg/L			12/28/23 16:50	1
o-Xylene	<0.00100	U	0.00100	mg/L			12/28/23 16:50	1
Xylenes, Total	<0.0100	U	0.0100	mg/L			12/28/23 16:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		63 - 144				12/28/23 16:50	1
4-Bromofluorobenzene (Surr)	87		74 - 124				12/28/23 16:50	1
Dibromofluoromethane (Surr)	98		75 - 131				12/28/23 16:50	1
Toluene-d8 (Surr)	100		80 - 120				12/28/23 16:50	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0100	U	0.0100	mg/L			12/28/23 16:50	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	463		0.500	mg/L			12/23/23 09:13	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1520		20.0	mg/L			12/26/23 17:40	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Client Sample ID: Dup-2

Lab Sample ID: 880-37238-8

Date Collected: 12/21/23 00:00

Matrix: Water

Date Received: 12/21/23 13:49

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100	mg/L			12/28/23 17:11	1
Toluene	<0.00100	U	0.00100	mg/L			12/28/23 17:11	1
Ethylbenzene	<0.00100	U	0.00100	mg/L			12/28/23 17:11	1
m,p-Xylenes	<0.0100	U	0.0100	mg/L			12/28/23 17:11	1
o-Xylene	<0.00100	U	0.00100	mg/L			12/28/23 17:11	1
Xylenes, Total	<0.0100	U	0.0100	mg/L			12/28/23 17:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		63 - 144		12/28/23 17:11	1
4-Bromofluorobenzene (Surr)	89		74 - 124		12/28/23 17:11	1
Dibromofluoromethane (Surr)	99		75 - 131		12/28/23 17:11	1
Toluene-d8 (Surr)	101		80 - 120		12/28/23 17:11	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0100	U	0.0100	mg/L			12/28/23 17:11	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	265		0.500	mg/L			12/23/23 09:01	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1010		10.0	mg/L			12/26/23 17:40	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Method: 8260C - Volatile Organic Compounds by GC/MS
Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA	BFB	DBFM	TOL
		(63-144)	(74-124)	(75-131)	(80-120)
880-37238-1	TMW-10	92	123 *3	102	120
880-37238-1 MS	TMW-10	114	90	99	99
880-37238-2	TMW-1	96	121 *3	101	119
880-37238-3	TMW-9	98	125 S1+ *3	101	117
880-37238-4	TMW-3	106	89	105	99
880-37238-5	TMW-2	103	88	100	100
880-37238-6	TMW-11	107	89	99	100
880-37238-7	TMW-12	98	87	98	100
880-37238-8	Dup-2	99	89	99	101
LCS 860-136702/3	Lab Control Sample	111	86	95	96
LCS 860-138343/3	Lab Control Sample	91	96	99	94
LCSD 860-136702/4	Lab Control Sample Dup	110	89	98	97
LCSD 860-138343/4	Lab Control Sample Dup	96	94	104	96
MB 860-136702/8	Method Blank	89	121 *3	98	117
MB 860-138343/8	Method Blank	95	88	96	100
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					
BFB = 4-Bromofluorobenzene (Surr)					
DBFM = Dibromofluoromethane (Surr)					
TOL = Toluene-d8 (Surr)					

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 860-136702/8

Matrix: Water

Analysis Batch: 136702

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100	mg/L			12/27/23 12:12	1
Toluene	<0.00100	U	0.00100	mg/L			12/27/23 12:12	1
Ethylbenzene	<0.00100	U	0.00100	mg/L			12/27/23 12:12	1
m,p-Xylenes	<0.0100	U	0.0100	mg/L			12/27/23 12:12	1
o-Xylene	<0.00100	U	0.00100	mg/L			12/27/23 12:12	1
Xylenes, Total	<0.0100	U	0.0100	mg/L			12/27/23 12:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		63 - 144		12/27/23 12:12	1
4-Bromofluorobenzene (Surr)	121	*3	74 - 124		12/27/23 12:12	1
Dibromofluoromethane (Surr)	98		75 - 131		12/27/23 12:12	1
Toluene-d8 (Surr)	117		80 - 120		12/27/23 12:12	1

Lab Sample ID: LCS 860-136702/3

Matrix: Water

Analysis Batch: 136702

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.0500	0.04541		mg/L		91	75 - 125
Toluene	0.0500	0.04036		mg/L		81	70 - 130
Ethylbenzene	0.0500	0.04206		mg/L		84	75 - 125
m,p-Xylenes	0.0500	0.04026		mg/L		81	75 - 125
o-Xylene	0.0500	0.04314		mg/L		86	75 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	111		63 - 144
4-Bromofluorobenzene (Surr)	86		74 - 124
Dibromofluoromethane (Surr)	95		75 - 131
Toluene-d8 (Surr)	96		80 - 120

Lab Sample ID: LCSD 860-136702/4

Matrix: Water

Analysis Batch: 136702

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.0500	0.04397		mg/L		88	75 - 125	3	25
Toluene	0.0500	0.03959		mg/L		79	70 - 130	2	25
Ethylbenzene	0.0500	0.04133		mg/L		83	75 - 125	2	25
m,p-Xylenes	0.0500	0.03911		mg/L		78	75 - 125	3	25
o-Xylene	0.0500	0.04234		mg/L		85	75 - 125	2	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	110		63 - 144
4-Bromofluorobenzene (Surr)	89		74 - 124
Dibromofluoromethane (Surr)	98		75 - 131
Toluene-d8 (Surr)	97		80 - 120

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 880-37238-1 MS

Matrix: Water

Analysis Batch: 136702

Client Sample ID: TMW-10

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Benzene	<0.00100	U	0.0500	0.05456		mg/L		109	66 - 142	
Toluene	<0.00100	U	0.0500	0.05081		mg/L		102	59 - 139	
Ethylbenzene	<0.00100	U	0.0500	0.05310		mg/L		106	75 - 125	
m,p-Xylenes	<0.0100	U	0.0500	0.05001		mg/L		100	75 - 125	
o-Xylene	<0.00100	U	0.0500	0.05414		mg/L		108	75 - 125	

Surrogate	MS	MS	
	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	114		63 - 144
4-Bromofluorobenzene (Surr)	90		74 - 124
Dibromofluoromethane (Surr)	99		75 - 131
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: MB 860-138343/8

Matrix: Water

Analysis Batch: 138343

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00100	U	0.00100	mg/L			12/28/23 12:17	1
Toluene	<0.00100	U	0.00100	mg/L			12/28/23 12:17	1
Ethylbenzene	<0.00100	U	0.00100	mg/L			12/28/23 12:17	1
m,p-Xylenes	<0.0100	U	0.0100	mg/L			12/28/23 12:17	1
o-Xylene	<0.00100	U	0.00100	mg/L			12/28/23 12:17	1
Xylenes, Total	<0.0100	U	0.0100	mg/L			12/28/23 12:17	1

Surrogate	MB	MB		Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier	Limits			
1,2-Dichloroethane-d4 (Surr)	95		63 - 144		12/28/23 12:17	1
4-Bromofluorobenzene (Surr)	88		74 - 124		12/28/23 12:17	1
Dibromofluoromethane (Surr)	96		75 - 131		12/28/23 12:17	1
Toluene-d8 (Surr)	100		80 - 120		12/28/23 12:17	1

Lab Sample ID: LCS 860-138343/3

Matrix: Water

Analysis Batch: 138343

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits
	Added	Result	Qualifier					
Benzene	0.0500	0.06051		mg/L		121	75 - 125	
Toluene	0.0500	0.05702		mg/L		114	70 - 130	
Ethylbenzene	0.0500	0.05760		mg/L		115	75 - 125	
m,p-Xylenes	0.0500	0.05797		mg/L		116	75 - 125	
o-Xylene	0.0500	0.05664		mg/L		113	75 - 125	

Surrogate	LCS	LCS	
	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		63 - 144
4-Bromofluorobenzene (Surr)	96		74 - 124
Dibromofluoromethane (Surr)	99		75 - 131
Toluene-d8 (Surr)	94		80 - 120

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 860-138343/4

Matrix: Water

Analysis Batch: 138343

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Benzene	0.0500	0.04994		mg/L		100	75 - 125	19		25
Toluene	0.0500	0.04755		mg/L		95	70 - 130	18		25
Ethylbenzene	0.0500	0.04807		mg/L		96	75 - 125	18		25
m,p-Xylenes	0.0500	0.04812		mg/L		96	75 - 125	19		25
o-Xylene	0.0500	0.04772		mg/L		95	75 - 125	17		25

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	96		63 - 144
4-Bromofluorobenzene (Surr)	94		74 - 124
Dibromofluoromethane (Surr)	104		75 - 131
Toluene-d8 (Surr)	96		80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-136466/3

Matrix: Water

Analysis Batch: 136466

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	<0.500	U	0.500	mg/L			12/22/23 17:14	1

Lab Sample ID: MB 860-136466/47

Matrix: Water

Analysis Batch: 136466

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	<0.500	U	0.500	mg/L			12/23/23 02:30	1

Lab Sample ID: LCS 860-136466/48

Matrix: Water

Analysis Batch: 136466

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Chloride	5.00	4.826		mg/L		97	90 - 110			

Lab Sample ID: LCSD 860-136466/49

Matrix: Water

Analysis Batch: 136466

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Chloride	5.00	4.755		mg/L		95	90 - 110	1		20

Lab Sample ID: LLCS 860-136466/7

Matrix: Water

Analysis Batch: 136466

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Chloride	0.500	0.5214		mg/L		104	50 - 150			

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-136563/1

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 136563

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<5.00	U	5.00	mg/L			12/26/23 17:40	1

Lab Sample ID: LCS 860-136563/2

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 136563

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	1107		mg/L		111	80 - 120

Lab Sample ID: LCSD 860-136563/3

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 136563

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	1108		mg/L		111	80 - 120	0	10

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

GC/MS VOA

Analysis Batch: 136702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37238-1	TMW-10	Total/NA	Water	8260C	
880-37238-2	TMW-1	Total/NA	Water	8260C	
880-37238-3	TMW-9	Total/NA	Water	8260C	
MB 860-136702/8	Method Blank	Total/NA	Water	8260C	
LCS 860-136702/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 860-136702/4	Lab Control Sample Dup	Total/NA	Water	8260C	
880-37238-1 MS	TMW-10	Total/NA	Water	8260C	

Analysis Batch: 138343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37238-4	TMW-3	Total/NA	Water	8260C	
880-37238-5	TMW-2	Total/NA	Water	8260C	
880-37238-6	TMW-11	Total/NA	Water	8260C	
880-37238-7	TMW-12	Total/NA	Water	8260C	
880-37238-8	Dup-2	Total/NA	Water	8260C	
MB 860-138343/8	Method Blank	Total/NA	Water	8260C	
LCS 860-138343/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 860-138343/4	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 138894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37238-1	TMW-10	Total/NA	Water	Total BTEX	
880-37238-2	TMW-1	Total/NA	Water	Total BTEX	
880-37238-3	TMW-9	Total/NA	Water	Total BTEX	
880-37238-4	TMW-3	Total/NA	Water	Total BTEX	
880-37238-5	TMW-2	Total/NA	Water	Total BTEX	
880-37238-6	TMW-11	Total/NA	Water	Total BTEX	
880-37238-7	TMW-12	Total/NA	Water	Total BTEX	
880-37238-8	Dup-2	Total/NA	Water	Total BTEX	

HPLC/IC

Analysis Batch: 136466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37238-1	TMW-10	Total/NA	Water	300.0	
880-37238-2	TMW-1	Total/NA	Water	300.0	
880-37238-3	TMW-9	Total/NA	Water	300.0	
880-37238-4	TMW-3	Total/NA	Water	300.0	
880-37238-5	TMW-2	Total/NA	Water	300.0	
880-37238-6	TMW-11	Total/NA	Water	300.0	
880-37238-7	TMW-12	Total/NA	Water	300.0	
880-37238-8	Dup-2	Total/NA	Water	300.0	
MB 860-136466/3	Method Blank	Total/NA	Water	300.0	
MB 860-136466/47	Method Blank	Total/NA	Water	300.0	
LCS 860-136466/48	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-136466/49	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-136466/7	Lab Control Sample	Total/NA	Water	300.0	

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QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

General Chemistry

Analysis Batch: 136563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37238-1	TMW-10	Total/NA	Water	SM 2540C	
880-37238-2	TMW-1	Total/NA	Water	SM 2540C	
880-37238-3	TMW-9	Total/NA	Water	SM 2540C	
880-37238-4	TMW-3	Total/NA	Water	SM 2540C	
880-37238-5	TMW-2	Total/NA	Water	SM 2540C	
880-37238-6	TMW-11	Total/NA	Water	SM 2540C	
880-37238-7	TMW-12	Total/NA	Water	SM 2540C	
880-37238-8	Dup-2	Total/NA	Water	SM 2540C	
MB 860-136563/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-136563/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-136563/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Client Sample ID: TMW-10
Date Collected: 12/21/23 08:35
Date Received: 12/21/23 13:49

Lab Sample ID: 880-37238-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	136702	12/27/23 12:32	NA	EET HOU
Total/NA	Analysis	Total BTEX		1			138894	12/27/23 12:32	AN	EET HOU
Total/NA	Analysis	300.0		1			136466	12/23/23 07:45	WP	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	136563	12/26/23 17:40	SA	EET HOU

Client Sample ID: TMW-1
Date Collected: 12/21/23 08:58
Date Received: 12/21/23 13:49

Lab Sample ID: 880-37238-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	136702	12/27/23 12:53	NA	EET HOU
Total/NA	Analysis	Total BTEX		1			138894	12/27/23 12:53	AN	EET HOU
Total/NA	Analysis	300.0		1			136466	12/23/23 07:58	WP	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	136563	12/26/23 17:40	SA	EET HOU

Client Sample ID: TMW-9
Date Collected: 12/21/23 09:26
Date Received: 12/21/23 13:49

Lab Sample ID: 880-37238-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	136702	12/27/23 13:13	NA	EET HOU
Total/NA	Analysis	Total BTEX		1			138894	12/27/23 13:13	AN	EET HOU
Total/NA	Analysis	300.0		1			136466	12/23/23 08:10	WP	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	136563	12/26/23 17:40	SA	EET HOU

Client Sample ID: TMW-3
Date Collected: 12/21/23 09:36
Date Received: 12/21/23 13:49

Lab Sample ID: 880-37238-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	138343	12/28/23 15:48	AN	EET HOU
Total/NA	Analysis	Total BTEX		1			138894	12/28/23 15:48	AN	EET HOU
Total/NA	Analysis	300.0		1			136466	12/23/23 08:23	WP	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	136563	12/26/23 17:40	SA	EET HOU

Client Sample ID: TMW-2
Date Collected: 12/21/23 09:56
Date Received: 12/21/23 13:49

Lab Sample ID: 880-37238-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	138343	12/28/23 16:09	AN	EET HOU
Total/NA	Analysis	Total BTEX		1			138894	12/28/23 16:09	AN	EET HOU
Total/NA	Analysis	300.0		1			136466	12/23/23 08:35	WP	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	136563	12/26/23 17:40	SA	EET HOU

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Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Client Sample ID: TMW-11
Date Collected: 12/21/23 10:11
Date Received: 12/21/23 13:49

Lab Sample ID: 880-37238-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	138343	12/28/23 16:30	AN	EET HOU
Total/NA	Analysis	Total BTEX		1			138894	12/28/23 16:30	AN	EET HOU
Total/NA	Analysis	300.0		1			136466	12/23/23 08:48	WP	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	136563	12/26/23 17:40	SA	EET HOU

Client Sample ID: TMW-12
Date Collected: 12/21/23 10:29
Date Received: 12/21/23 13:49

Lab Sample ID: 880-37238-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	138343	12/28/23 16:50	AN	EET HOU
Total/NA	Analysis	Total BTEX		1			138894	12/28/23 16:50	AN	EET HOU
Total/NA	Analysis	300.0		1			136466	12/23/23 09:13	WP	EET HOU
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	136563	12/26/23 17:40	SA	EET HOU

Client Sample ID: Dup-2
Date Collected: 12/21/23 00:00
Date Received: 12/21/23 13:49

Lab Sample ID: 880-37238-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	138343	12/28/23 17:11	AN	EET HOU
Total/NA	Analysis	Total BTEX		1			138894	12/28/23 17:11	AN	EET HOU
Total/NA	Analysis	300.0		1			136466	12/23/23 09:01	WP	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	136563	12/26/23 17:40	SA	EET HOU

Laboratory References:
EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Laboratory: Eurofins Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-23-53	06-30-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Water	Total BTEX

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET HOU
Total BTEX	Total BTEX Calculation	TAL SOP	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
5030C	Purge and Trap	SW846	EET HOU

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-37238-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-37238-1	TMW-10	Water	12/21/23 08:35	12/21/23 13:49
880-37238-2	TMW-1	Water	12/21/23 08:58	12/21/23 13:49
880-37238-3	TMW-9	Water	12/21/23 09:26	12/21/23 13:49
880-37238-4	TMW-3	Water	12/21/23 09:36	12/21/23 13:49
880-37238-5	TMW-2	Water	12/21/23 09:56	12/21/23 13:49
880-37238-6	TMW-11	Water	12/21/23 10:11	12/21/23 13:49
880-37238-7	TMW-12	Water	12/21/23 10:29	12/21/23 13:49
880-37238-8	Dup-2	Water	12/21/23 00:00	12/21/23 13:49

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No. 2886

CHAIN-OF-CUSTODY

11211 W Florida Ave
Midland, TX 79701
Phone: 432-704-5440

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)					
Company:		Eurofins Environment Testing South Cent			
Address:		4145 Greenbriar Dr			
City:		Stafford			
State, Zip:		TX, 77477			
Phone:		281-240-4200(Tel)			
Email:					
Project Name:		EBDU #37			
Site:					
Sample Identification - Client ID (Lab ID)					
TMW-10 (880-37238-1)	12/21/23	08:35 Mountain	Water	X	X
TMW-1 (880-37238-2)	12/21/23	08:58 Mountain	Water	X	X
TMW-9 (880-37238-3)	12/21/23	09:26 Mountain	Water	X	X
TMW-3 (880-37238-4)	12/21/23	09:36 Mountain	Water	X	X
TMW-2 (880-37238-5)	12/21/23	09:56 Mountain	Water	X	X
TMW-11 (880-37238-6)	12/21/23	10:11 Mountain	Water	X	X
TMW-12 (880-37238-7)	12/21/23	10:29 Mountain	Water	X	X
Dup-2 (880-37238-8)	12/21/23	Mountain	Water	X	X
Special Instructions/Note: Temp 30 IR ID HOU-369 C/F -0.0 Corrected Temp. 30					
Preservation Codes: A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2OAS E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Y Trizma Z other (specify) Other					
Analysis Requested					
Carrier Tracking No(s): 880-8753.1					
State of Origin: New Mexico					
Page 1 of 1					
Job #: 880-37238-1					
Accreditations Required (See note): NELAP Texas					
Due Date Requested: 12/25/2023					
TAT Requested (days):					
PO #:					
WO #:					
Project #: 88000515					
SSOW#:					
Matrix (W=water, Seawater, Solid, B=Tissue, A=air)					
Sample Type (C=comp, G=grab)					
Sample Date					
Sample Time					
Total BTEX					
2540C_Calcid					
300_ORGM_28D/ Chloride					
Cooler Temperature(s) °C and Other Remarks:					

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-37238-1
SDG Number: 19-0112-49

Login Number: 37238
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-37238-1
SDG Number: 19-0112-49

Login Number: 37238
List Number: 2
Creator: Garcia, Yaillet

List Source: Eurofins Houston
List Creation: 12/22/23 03:42 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Appendix F
Windmill Laboratory Report



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 4/30/2024 4:30:51 PM

JOB DESCRIPTION

Apache/EBDU 37
19-0112-49

JOB NUMBER

880-41793-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701



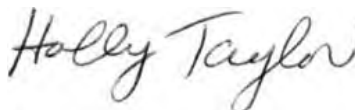
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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4/30/2024 4:30:51 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Laboratory Job ID: 880-41793-1
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)

Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Case Narrative

Client: Larson & Associates, Inc.
Project: Apache/EBDU 37

Job ID: 880-41793-1

Job ID: 880-41793-1

Eurofins Midland

Job Narrative 880-41793-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 4/3/2024 2:48 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.5°C.

GC/MS VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA

Method 8270E_QQQ: Three surrogates are used for this analysis. The laboratory's SOP allows one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: Windwill (880-41793-1). These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PCBs

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300_ORGFM_28D: The followings samples were analyzed at a dilution for Chloride due to the Matrix Conductivity Threshold (MCT) of the instrument: Windwill (880-41793-1), (860-71138-B-1), (860-71138-B-1 MS) and (860-71138-B-1 MSD). The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 420.4_NP: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-154711 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method SM4500_H+: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Windwill (880-41793-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Client Sample ID: Windwill

Lab Sample ID: 880-41793-1

Date Collected: 04/03/24 10:15

Matrix: Water

Date Received: 04/03/24 14:48

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.00500	U	0.00500	mg/L			04/08/24 12:45	1
1,1,2,2-Tetrachloroethane	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
1,1,2-Trichloroethane	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
1,1-Dichloroethane	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
1,1-Dichloroethene	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
1,2,4-Trichlorobenzene	<0.00500	U	0.00500	mg/L			04/08/24 12:45	1
1,2-Dichlorobenzene	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
1,2-Dichloroethane	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
1,2-Dichloropropane	<0.00500	U	0.00500	mg/L			04/08/24 12:45	1
1,4-Dichlorobenzene	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
Benzene	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
Carbon tetrachloride	<0.00500	U	0.00500	mg/L			04/08/24 12:45	1
Chloroform	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
cis-1,2-Dichloroethene	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
Ethylbenzene	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
m,p-Xylenes	<0.0100	U	0.0100	mg/L			04/08/24 12:45	1
Methylene Chloride	<0.00500	U	0.00500	mg/L			04/08/24 12:45	1
o-Xylene	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
Styrene	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
Tetrachloroethene	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
Toluene	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
trans-1,2-Dichloroethene	<0.00100	U	0.00100	mg/L			04/08/24 12:45	1
Trichloroethene	<0.00500	U	0.00500	mg/L			04/08/24 12:45	1
Vinyl chloride	<0.00200	U	0.00200	mg/L			04/08/24 12:45	1
Xylenes, Total	<0.0100	U	0.0100	mg/L			04/08/24 12:45	1
1,2-Dibromoethane	<0.00500	U	0.00500	mg/L			04/08/24 12:45	1
MTBE	<0.00500	U	0.00500	mg/L			04/08/24 12:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		63 - 144		04/08/24 12:45	1
4-Bromofluorobenzene (Surr)	103		74 - 124		04/08/24 12:45	1
Dibromofluoromethane (Surr)	98		75 - 131		04/08/24 12:45	1
Toluene-d8 (Surr)	99		80 - 120		04/08/24 12:45	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/12/24 16:15	1
2-Methylnaphthalene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/12/24 16:15	1
Acenaphthene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/12/24 16:15	1
Acenaphthylene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/12/24 16:15	1
Anthracene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/12/24 16:15	1
Benzo[a]anthracene	<0.0286	U	0.0286	ug/L		04/04/24 16:00	04/12/24 16:15	1
Benzo[a]pyrene	<0.0571	U	0.0571	ug/L		04/04/24 16:00	04/16/24 00:21	1
Benzo[b]fluoranthene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/16/24 00:21	1
Benzo[g,h,i]perylene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/16/24 00:21	1
Benzo[k]fluoranthene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/16/24 00:21	1
Chrysene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/12/24 16:15	1
Dibenz(a,h)anthracene	<0.114	U	0.114	ug/L		04/04/24 16:00	04/16/24 00:21	1
Fluoranthene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/12/24 16:15	1
Fluorene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/12/24 16:15	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Client Sample ID: Windwill

Lab Sample ID: 880-41793-1

Date Collected: 04/03/24 10:15

Matrix: Water

Date Received: 04/03/24 14:48

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/16/24 00:21	1
Naphthalene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/12/24 16:15	1
Phenanthrene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/12/24 16:15	1
Pyrene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/12/24 16:15	1
Atrazine	<0.500	U	0.500	ug/L		04/04/24 16:00	04/12/24 16:15	1
Pentachlorophenol	<1.14	U	1.14	ug/L		04/04/24 16:00	04/12/24 16:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	88		43 - 130	04/04/24 16:00	04/12/24 16:15	1
2-Fluorobiphenyl (Surr)	86		43 - 130	04/04/24 16:00	04/16/24 00:21	1
Nitrobenzene-d5 (Surr)	83		37 - 133	04/04/24 16:00	04/12/24 16:15	1
Nitrobenzene-d5 (Surr)	142	S1+	37 - 133	04/04/24 16:00	04/16/24 00:21	1
p-Terphenyl-d14 (Surr)	78		47 - 130	04/04/24 16:00	04/12/24 16:15	1
p-Terphenyl-d14 (Surr)	96		47 - 130	04/04/24 16:00	04/16/24 00:21	1

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.000260	U	0.000260	mg/L		04/04/24 21:01	04/05/24 16:32	1
PCB-1221	<0.000520	U	0.000520	mg/L		04/04/24 21:01	04/05/24 16:32	1
PCB-1232	<0.000520	U	0.000520	mg/L		04/04/24 21:01	04/05/24 16:32	1
PCB-1242	<0.000260	U	0.000260	mg/L		04/04/24 21:01	04/05/24 16:32	1
PCB-1248	<0.000520	U	0.000520	mg/L		04/04/24 21:01	04/05/24 16:32	1
PCB-1254	<0.000520	U	0.000520	mg/L		04/04/24 21:01	04/05/24 16:32	1
PCB-1260	<0.000260	U	0.000260	mg/L		04/04/24 21:01	04/05/24 16:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	70		52 - 134	04/04/24 21:01	04/05/24 16:32	1
DCB Decachlorobiphenyl (Surr)	41		28 - 94	04/04/24 21:01	04/05/24 16:32	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<1.00	U	1.00	mg/L			04/25/24 16:53	1
Nitrate as N	2.78		0.100	mg/L			04/04/24 19:41	1
Nitrite as N	<0.100	U	0.100	mg/L			04/04/24 19:41	1
Sulfate	56.5		0.500	mg/L			04/04/24 19:41	1
Chloride	440		2.50	mg/L			04/04/24 19:24	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0200	U	0.0200	mg/L		04/08/24 10:30	04/08/24 17:36	1
Antimony	<0.00400	U	0.00400	mg/L		04/08/24 10:30	04/08/24 17:36	1
Arsenic	<0.00400	U	0.00400	mg/L		04/08/24 10:30	04/08/24 17:36	1
Barium	0.218		0.00400	mg/L		04/08/24 10:30	04/08/24 17:36	1
Beryllium	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 17:36	1
Boron	0.154		0.0100	mg/L		04/08/24 10:30	04/08/24 17:36	1
Cadmium	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 17:36	1
Chromium	<0.00400	U	0.00400	mg/L		04/08/24 10:30	04/08/24 17:36	1
Cobalt	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 17:36	1
Copper	0.00509		0.00400	mg/L		04/08/24 10:30	04/08/24 17:36	1
Iron	<0.100	U	0.100	mg/L		04/08/24 10:30	04/08/24 17:36	1
Lead	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 17:36	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Client Sample ID: Windwill
Date Collected: 04/03/24 10:15
Date Received: 04/03/24 14:48

Lab Sample ID: 880-41793-1
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) (Continued)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Manganese	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 17:36	1	
Molybdenum	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 17:36	1	
Nickel	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 17:36	1	
Selenium	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 17:36	1	
Silver	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 17:36	1	
Thallium	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 17:36	1	
Uranium	0.00315		0.00100	mg/L		04/08/24 10:30	04/08/24 17:36	1	
Zinc	0.00465		0.00400	mg/L		04/08/24 10:30	04/08/24 17:36	1	

Method: SW846 7470A - Mercury (CVAA)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Mercury	<0.000200	U	0.000200	mg/L		04/08/24 23:16	04/09/24 17:16	1	

General Chemistry									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Phenols, Total (EPA 420.4)	<0.0100	U F1	0.0100	mg/L			04/12/24 11:33	1	
Cyanide, Total (EPA Kelada 01)	<0.00500	U	0.00500	mg/L			04/11/24 11:25	1	
Total Dissolved Solids (SM 2540C)	1000		50.0	mg/L			04/04/24 20:44	1	
pH (SM 4500 H+ B)	7.3	HF	0.01	S.U.			04/04/24 20:18	1	
Temperature (SM 4500 H+ B)	22.0	HF	0.01	Deg. C			04/04/24 20:18	1	

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method: 8260D - Volatile Organic Compounds by GC/MS
Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA (63-144)	BFB (74-124)	DBFM (75-131)	TOL (80-120)
880-41793-1	Windwill	105	103	98	99
LCS 860-153663/3	Lab Control Sample	100	105	99	100
LCSD 860-153663/4	Lab Control Sample Dup	100	102	99	98
MB 860-153663/10	Method Blank	106	102	99	102
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					
BFB = 4-Bromofluorobenzene (Surr)					
DBFM = Dibromofluoromethane (Surr)					
TOL = Toluene-d8 (Surr)					

Method: 8270E - Semivolatile Organic Compounds (GC/MS)
Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	FBP (43-130)	NBZ (37-133)	TPHd14 (47-130)
880-41793-1	Windwill	88	83	78
880-41793-1	Windwill	86	142 S1+	96
LCS 860-153448/2-A	Lab Control Sample	86	95	90
LCSD 860-153448/3-A	Lab Control Sample Dup	92	101	104
MB 860-153448/1-A	Method Blank	92	94	96
Surrogate Legend				
FBP = 2-Fluorobiphenyl (Surr)				
NBZ = Nitrobenzene-d5 (Surr)				
TPHd14 = p-Terphenyl-d14 (Surr)				

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography
Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (52-134)	DCB1 (28-94)
880-41793-1	Windwill	70	41
LCS 860-153141/4-A	Lab Control Sample	72	40
LCSD 860-153141/5-A	Lab Control Sample Dup	77	43
MB 860-153141/1-A	Method Blank	71	42
Surrogate Legend			
TCX = Tetrachloro-m-xylene			
DCB = DCB Decachlorobiphenyl (Surr)			

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 860-153663/10
Matrix: Water
Analysis Batch: 153663

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,1,1-Trichloroethane	<0.00500	U	0.00500	mg/L			04/08/24 10:41	1
1,1,2,2-Tetrachloroethane	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
1,1,2-Trichloroethane	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
1,1-Dichloroethane	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
1,1-Dichloroethene	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
1,2,4-Trichlorobenzene	<0.00500	U	0.00500	mg/L			04/08/24 10:41	1
1,2-Dichlorobenzene	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
1,2-Dichloroethane	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
1,2-Dichloropropane	<0.00500	U	0.00500	mg/L			04/08/24 10:41	1
1,4-Dichlorobenzene	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
Benzene	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
Carbon tetrachloride	<0.00500	U	0.00500	mg/L			04/08/24 10:41	1
Chloroform	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
cis-1,2-Dichloroethene	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
Ethylbenzene	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
m,p-Xylenes	<0.0100	U	0.0100	mg/L			04/08/24 10:41	1
Methylene Chloride	<0.00500	U	0.00500	mg/L			04/08/24 10:41	1
o-Xylene	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
Styrene	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
Tetrachloroethene	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
Toluene	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
trans-1,2-Dichloroethene	<0.00100	U	0.00100	mg/L			04/08/24 10:41	1
Trichloroethene	<0.00500	U	0.00500	mg/L			04/08/24 10:41	1
Vinyl chloride	<0.00200	U	0.00200	mg/L			04/08/24 10:41	1
Xylenes, Total	<0.0100	U	0.0100	mg/L			04/08/24 10:41	1
1,2-Dibromoethane	<0.00500	U	0.00500	mg/L			04/08/24 10:41	1
MTBE	<0.00500	U	0.00500	mg/L			04/08/24 10:41	1
Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac		
	%Recovery	Qualifier						
1,2-Dichloroethane-d4 (Surr)	106		63 - 144		04/08/24 10:41	1		
4-Bromofluorobenzene (Surr)	102		74 - 124		04/08/24 10:41	1		
Dibromofluoromethane (Surr)	99		75 - 131		04/08/24 10:41	1		
Toluene-d8 (Surr)	102		80 - 120		04/08/24 10:41	1		

Lab Sample ID: LCS 860-153663/3
Matrix: Water
Analysis Batch: 153663

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
1,1,1-Trichloroethane	0.0500	0.05193		mg/L		104	70 - 130
1,1,2,2-Tetrachloroethane	0.0500	0.05345		mg/L		107	74 - 125
1,1,2-Trichloroethane	0.0500	0.05090		mg/L		102	75 - 130
1,1-Dichloroethane	0.0500	0.05092		mg/L		102	71 - 130
1,1-Dichloroethene	0.0500	0.05549		mg/L		111	50 - 150
1,2,4-Trichlorobenzene	0.0500	0.05211		mg/L		104	75 - 135
1,2-Dichlorobenzene	0.0500	0.05026		mg/L		101	75 - 125
1,2-Dichloroethane	0.0500	0.04960		mg/L		99	72 - 130
1,2-Dichloropropane	0.0500	0.04806		mg/L		96	74 - 125

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 860-153663/3

Matrix: Water

Analysis Batch: 153663

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
1,4-Dichlorobenzene	0.0500	0.04974		mg/L		99	75 - 125
Benzene	0.0500	0.04930		mg/L		99	75 - 125
Carbon tetrachloride	0.0500	0.04790		mg/L		96	70 - 125
Chloroform	0.0500	0.04981		mg/L		100	70 - 121
cis-1,2-Dichloroethene	0.0500	0.05158		mg/L		103	75 - 125
Ethylbenzene	0.0500	0.05097		mg/L		102	75 - 125
m,p-Xylenes	0.0500	0.05079		mg/L		102	75 - 125
Methylene Chloride	0.0500	0.04779		mg/L		96	71 - 125
o-Xylene	0.0500	0.05061		mg/L		101	75 - 125
Styrene	0.0500	0.04926		mg/L		99	75 - 125
Tetrachloroethene	0.0500	0.05132		mg/L		103	71 - 125
Toluene	0.0500	0.04963		mg/L		99	75 - 130
trans-1,2-Dichloroethene	0.0500	0.05266		mg/L		105	75 - 125
Trichloroethene	0.0500	0.05056		mg/L		101	75 - 135
Vinyl chloride	0.0500	0.05348		mg/L		107	60 - 140
1,2-Dibromoethane	0.0500	0.04969		mg/L		99	73 - 125
MTBE	0.0500	0.05189		mg/L		104	65 - 135

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	100		63 - 144
4-Bromofluorobenzene (Surr)	105		74 - 124
Dibromofluoromethane (Surr)	99		75 - 131
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCSD 860-153663/4

Matrix: Water

Analysis Batch: 153663

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
	Added	Result	Qualifier						
1,1,1-Trichloroethane	0.0500	0.04893		mg/L		98	70 - 130	6	25
1,1,1,2-Tetrachloroethane	0.0500	0.04965		mg/L		99	74 - 125	7	25
1,1,2-Trichloroethane	0.0500	0.04916		mg/L		98	75 - 130	3	25
1,1-Dichloroethane	0.0500	0.04906		mg/L		98	71 - 130	4	25
1,1-Dichloroethene	0.0500	0.05105		mg/L		102	50 - 150	8	25
1,2,4-Trichlorobenzene	0.0500	0.04764		mg/L		95	75 - 135	9	25
1,2-Dichlorobenzene	0.0500	0.04581		mg/L		92	75 - 125	9	25
1,2-Dichloroethane	0.0500	0.04886		mg/L		98	72 - 130	2	25
1,2-Dichloropropane	0.0500	0.04683		mg/L		94	74 - 125	3	25
1,4-Dichlorobenzene	0.0500	0.04502		mg/L		90	75 - 125	10	25
Benzene	0.0500	0.04757		mg/L		95	75 - 125	4	25
Carbon tetrachloride	0.0500	0.04459		mg/L		89	70 - 125	7	25
Chloroform	0.0500	0.04804		mg/L		96	70 - 121	4	25
cis-1,2-Dichloroethene	0.0500	0.04959		mg/L		99	75 - 125	4	25
Ethylbenzene	0.0500	0.04784		mg/L		96	75 - 125	6	25
m,p-Xylenes	0.0500	0.04759		mg/L		95	75 - 125	6	25
Methylene Chloride	0.0500	0.04531		mg/L		91	71 - 125	5	25
o-Xylene	0.0500	0.04767		mg/L		95	75 - 125	6	25
Styrene	0.0500	0.04700		mg/L		94	75 - 125	5	25

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 860-153663/4				Client Sample ID: Lab Control Sample Dup							
Matrix: Water				Prep Type: Total/NA							
Analysis Batch: 153663											
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit		
Tetrachloroethene	0.0500	0.04748		mg/L		95	71 - 125	8	25		
Toluene	0.0500	0.04702		mg/L		94	75 - 130	5	25		
trans-1,2-Dichloroethene	0.0500	0.05018		mg/L		100	75 - 125	5	25		
Trichloroethene	0.0500	0.04854		mg/L		97	75 - 135	4	25		
Vinyl chloride	0.0500	0.05079		mg/L		102	60 - 140	5	25		
1,2-Dibromoethane	0.0500	0.04810		mg/L		96	73 - 125	3	25		
MTBE	0.0500	0.05101		mg/L		102	65 - 135	2	25		
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	100		63 - 144								
4-Bromofluorobenzene (Surr)	102		74 - 124								
Dibromofluoromethane (Surr)	99		75 - 131								
Toluene-d8 (Surr)	98		80 - 120								

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-153448/1-A					Client Sample ID: Method Blank				
Matrix: Water					Prep Type: Total/NA				
Analysis Batch: 154192					Prep Batch: 153448				
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
1-Methylnaphthalene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
2-Methylnaphthalene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Acenaphthene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Acenaphthylene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Anthracene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Benzo[a]anthracene	<0.0286	U	0.0286	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Benzo[a]pyrene	<0.0571	U	0.0571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Benzo[b]fluoranthene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Benzo[g,h,i]perylene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Benzo[k]fluoranthene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Chrysene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Dibenz(a,h)anthracene	<0.114	U	0.114	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Fluoranthene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Fluorene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Indeno[1,2,3-cd]pyrene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Naphthalene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Phenanthrene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Pyrene	<0.571	U	0.571	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Atrazine	<0.500	U	0.500	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Pentachlorophenol	<1.14	U	1.14	ug/L		04/04/24 16:00	04/10/24 20:26	1	
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
2-Fluorobiphenyl (Surr)	92		43 - 130			04/04/24 16:00	04/10/24 20:26	1	
Nitrobenzene-d5 (Surr)	94		37 - 133			04/04/24 16:00	04/10/24 20:26	1	
p-Terphenyl-d14 (Surr)	96		47 - 130			04/04/24 16:00	04/10/24 20:26	1	

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-153448/2-A

Matrix: Water

Analysis Batch: 154192

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 153448

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
1-Methylnaphthalene	2.86	2.454		ug/L		86	52 - 130	
2-Methylnaphthalene	2.86	2.398		ug/L		84	25 - 175	
Acenaphthene	2.86	2.352		ug/L		82	60 - 132	
Acenaphthylene	2.86	2.722		ug/L		95	54 - 126	
Anthracene	2.86	2.146		ug/L		75	43 - 135	
Benzo[a]anthracene	2.86	3.391		ug/L		119	42 - 133	
Benzo[a]pyrene	2.86	2.685		ug/L		94	32 - 148	
Benzo[b]fluoranthene	2.86	3.247		ug/L		114	42 - 140	
Benzo[g,h,i]perylene	2.86	1.891		ug/L		66	25 - 195	
Benzo[k]fluoranthene	2.86	2.950		ug/L		103	25 - 146	
Chrysene	2.86	2.529		ug/L		89	47 - 130	
Dibenz(a,h)anthracene	2.86	2.082		ug/L		73	32 - 200	
Fluoranthene	2.86	2.646		ug/L		93	43 - 130	
Fluorene	2.86	2.424		ug/L		85	70 - 120	
Indeno[1,2,3-cd]pyrene	2.86	1.961		ug/L		69	29 - 151	
Naphthalene	2.86	2.612		ug/L		91	36 - 120	
Phenanthrene	2.86	2.415		ug/L		85	65 - 120	
Pyrene	2.86	2.594		ug/L		91	70 - 130	
Atrazine	2.86	2.577		ug/L		90	70 - 130	
Pentachlorophenol	2.86	1.929		ug/L		68	38 - 152	

LCS LCS

Surrogate

%Recovery

Qualifier

Limits

2-Fluorobiphenyl (Surr)

86

43 - 130

Nitrobenzene-d5 (Surr)

95

37 - 133

p-Terphenyl-d14 (Surr)

90

47 - 130

Lab Sample ID: LCSD 860-153448/3-A

Matrix: Water

Analysis Batch: 154192

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 153448

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD Limit	
									RPD	Limit
1-Methylnaphthalene	2.86	2.561		ug/L		90	52 - 130		4	30
2-Methylnaphthalene	2.86	2.402		ug/L		84	25 - 175		0	30
Acenaphthene	2.86	2.394		ug/L		84	60 - 132		2	30
Acenaphthylene	2.86	3.010		ug/L		105	54 - 126		10	30
Anthracene	2.86	2.547		ug/L		89	43 - 135		17	30
Benzo[a]anthracene	2.86	3.582		ug/L		125	42 - 133		5	30
Benzo[a]pyrene	2.86	2.928		ug/L		102	32 - 148		9	30
Benzo[b]fluoranthene	2.86	3.222		ug/L		113	42 - 140		1	30
Benzo[g,h,i]perylene	2.86	2.300		ug/L		81	25 - 195		20	30
Benzo[k]fluoranthene	2.86	3.282		ug/L		115	25 - 146		11	30
Chrysene	2.86	2.660		ug/L		93	47 - 130		5	30
Dibenz(a,h)anthracene	2.86	2.367		ug/L		83	32 - 200		13	30
Fluoranthene	2.86	2.982		ug/L		104	43 - 130		12	30
Fluorene	2.86	2.609		ug/L		91	70 - 120		7	30
Indeno[1,2,3-cd]pyrene	2.86	2.301		ug/L		81	29 - 151		16	30
Naphthalene	2.86	2.565		ug/L		90	36 - 120		2	30
Phenanthrene	2.86	2.636		ug/L		92	65 - 120		9	30

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 860-153448/3-A
Matrix: Water
Analysis Batch: 154192

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 153448

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Pyrene	2.86	2.821		ug/L		99	70 - 130	8	30
Atrazine	2.86	2.784		ug/L		97	70 - 130	8	30
Pentachlorophenol	2.86	2.160		ug/L		76	38 - 152	11	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	92		43 - 130
Nitrobenzene-d5 (Surr)	101		37 - 133
p-Terphenyl-d14 (Surr)	104		47 - 130

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 860-153141/1-A
Matrix: Water
Analysis Batch: 153438

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 153141

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.000262	U	0.000262	mg/L		04/03/24 18:17	04/05/24 11:06	1
PCB-1221	<0.000524	U	0.000524	mg/L		04/03/24 18:17	04/05/24 11:06	1
PCB-1232	<0.000524	U	0.000524	mg/L		04/03/24 18:17	04/05/24 11:06	1
PCB-1242	<0.000262	U	0.000262	mg/L		04/03/24 18:17	04/05/24 11:06	1
PCB-1248	<0.000524	U	0.000524	mg/L		04/03/24 18:17	04/05/24 11:06	1
PCB-1254	<0.000524	U	0.000524	mg/L		04/03/24 18:17	04/05/24 11:06	1
PCB-1260	<0.000262	U	0.000262	mg/L		04/03/24 18:17	04/05/24 11:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		52 - 134	04/03/24 18:17	04/05/24 11:06	1
DCB Decachlorobiphenyl (Surr)	42		28 - 94	04/03/24 18:17	04/05/24 11:06	1

Lab Sample ID: LCS 860-153141/4-A
Matrix: Water
Analysis Batch: 153438

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 153141

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
PCB-1016	0.00520	0.005895		mg/L		113	43 - 130
PCB-1260	0.00520	0.004034		mg/L		78	50 - 95

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	72		52 - 134
DCB Decachlorobiphenyl (Surr)	40		28 - 94

Lab Sample ID: LCSD 860-153141/5-A
Matrix: Water
Analysis Batch: 153438

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 153141

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-1016	0.00525	0.005950		mg/L		113	43 - 130	1	20
PCB-1260	0.00525	0.004268		mg/L		81	50 - 95	6	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCSD 860-153141/5-A
Matrix: Water
Analysis Batch: 153438

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 153141

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	77		52 - 134
DCB Decachlorobiphenyl (Surr)	43		28 - 94

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-669273/53
Matrix: Water
Analysis Batch: 669273

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Fluoride	<1.00	U	1.00	mg/L			04/25/24 12:13	1

Lab Sample ID: LCS 400-669273/54
Matrix: Water
Analysis Batch: 669273

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Fluoride	10.0	9.997		mg/L		100	90 - 110	

Lab Sample ID: LCSD 400-669273/55
Matrix: Water
Analysis Batch: 669273

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	10.0	9.940		mg/L		99	90 - 110	1	15

Lab Sample ID: MB 880-77357/3
Matrix: Water
Analysis Batch: 77357

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Sulfate	<0.500	U	0.500	mg/L			04/04/24 12:19	1
Chloride	<0.500	U	0.500	mg/L			04/04/24 12:19	1

Lab Sample ID: LCS 880-77357/4
Matrix: Water
Analysis Batch: 77357

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Sulfate	25.0	24.28		mg/L		97	90 - 110	
Chloride	25.0	25.03		mg/L		100	90 - 110	

Lab Sample ID: LCSD 880-77357/5
Matrix: Water
Analysis Batch: 77357

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	25.0	24.46		mg/L		98	90 - 110	1	20
Chloride	25.0	24.95		mg/L		100	90 - 110	0	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-77358/3

Matrix: Water

Analysis Batch: 77358

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.100	U	0.100	mg/L			04/04/24 12:19	1
Nitrite as N	<0.100	U	0.100	mg/L			04/04/24 12:19	1

Lab Sample ID: LCS 880-77358/4

Matrix: Water

Analysis Batch: 77358

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	5.00	4.974		mg/L		99	90 - 110
Nitrite as N	5.00	5.063		mg/L		101	90 - 110

Lab Sample ID: LCSD 880-77358/5

Matrix: Water

Analysis Batch: 77358

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	5.00	4.967		mg/L		99	90 - 110	0	20
Nitrite as N	5.00	5.049		mg/L		101	90 - 110	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 860-153717/1-A

Matrix: Water

Analysis Batch: 153799

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 153717

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0200	U	0.0200	mg/L		04/08/24 10:30	04/08/24 16:42	1
Antimony	<0.00400	U	0.00400	mg/L		04/08/24 10:30	04/08/24 16:42	1
Arsenic	<0.00400	U	0.00400	mg/L		04/08/24 10:30	04/08/24 16:42	1
Barium	<0.00400	U	0.00400	mg/L		04/08/24 10:30	04/08/24 16:42	1
Beryllium	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 16:42	1
Boron	<0.0100	U	0.0100	mg/L		04/08/24 10:30	04/08/24 16:42	1
Cadmium	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 16:42	1
Chromium	<0.00400	U	0.00400	mg/L		04/08/24 10:30	04/08/24 16:42	1
Cobalt	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 16:42	1
Copper	<0.00400	U	0.00400	mg/L		04/08/24 10:30	04/08/24 16:42	1
Iron	<0.100	U	0.100	mg/L		04/08/24 10:30	04/08/24 16:42	1
Lead	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 16:42	1
Manganese	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 16:42	1
Molybdenum	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 16:42	1
Nickel	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 16:42	1
Selenium	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 16:42	1
Silver	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 16:42	1
Thallium	<0.00200	U	0.00200	mg/L		04/08/24 10:30	04/08/24 16:42	1
Uranium	<0.00100	U	0.00100	mg/L		04/08/24 10:30	04/08/24 16:42	1
Zinc	<0.00400	U	0.00400	mg/L		04/08/24 10:30	04/08/24 16:42	1

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 860-153717/2-A

Matrix: Water

Analysis Batch: 153799

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 153717

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	
	Added	Result	Qualifier				Limits	
Aluminum	0.500	0.4977		mg/L		100	80 - 120	
Antimony	0.100	0.09738		mg/L		97	80 - 120	
Arsenic	0.100	0.09919		mg/L		99	80 - 120	
Barium	0.100	0.09745		mg/L		97	80 - 120	
Beryllium	0.100	0.09822		mg/L		98	80 - 120	
Boron	0.100	0.09577		mg/L		96	80 - 120	
Cadmium	0.100	0.09956		mg/L		100	80 - 120	
Chromium	0.100	0.1005		mg/L		101	80 - 120	
Cobalt	0.100	0.09972		mg/L		100	80 - 120	
Copper	0.100	0.09952		mg/L		100	80 - 120	
Iron	0.500	0.5145		mg/L		103	80 - 120	
Lead	0.100	0.09749		mg/L		97	80 - 120	
Manganese	0.100	0.09918		mg/L		99	80 - 120	
Molybdenum	0.100	0.09914		mg/L		99	80 - 120	
Nickel	0.100	0.09964		mg/L		100	80 - 120	
Selenium	0.100	0.09675		mg/L		97	80 - 120	
Silver	0.0500	0.04944		mg/L		99	80 - 120	
Thallium	0.100	0.09858		mg/L		99	80 - 120	
Uranium	0.0249	0.02495		mg/L		100	80 - 120	
Zinc	0.100	0.09938		mg/L		99	80 - 120	

Lab Sample ID: LCSD 860-153717/3-A

Matrix: Water

Analysis Batch: 153799

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 153717

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec		RPD	
	Added	Result	Qualifier				Limits		RPD	Limit
Aluminum	0.500	0.4962		mg/L		99	80 - 120		0	20
Antimony	0.100	0.09982		mg/L		100	80 - 120		2	20
Arsenic	0.100	0.09960		mg/L		100	80 - 120		0	20
Barium	0.100	0.09735		mg/L		97	80 - 120		0	20
Beryllium	0.100	0.09948		mg/L		99	80 - 120		1	20
Boron	0.100	0.09964		mg/L		100	80 - 120		4	20
Cadmium	0.100	0.1002		mg/L		100	80 - 120		1	20
Chromium	0.100	0.1006		mg/L		101	80 - 120		0	20
Cobalt	0.100	0.09981		mg/L		100	80 - 120		0	20
Copper	0.100	0.09957		mg/L		100	80 - 120		0	20
Iron	0.500	0.5113		mg/L		102	80 - 120		1	20
Lead	0.100	0.09835		mg/L		98	80 - 120		1	20
Manganese	0.100	0.09927		mg/L		99	80 - 120		0	20
Molybdenum	0.100	0.09951		mg/L		100	80 - 120		0	20
Nickel	0.100	0.09984		mg/L		100	80 - 120		0	20
Selenium	0.100	0.09643		mg/L		96	80 - 120		0	20
Silver	0.0500	0.04992		mg/L		100	80 - 120		1	20
Thallium	0.100	0.09997		mg/L		100	80 - 120		1	20
Uranium	0.0249	0.02525		mg/L		102	80 - 120		1	20
Zinc	0.100	0.09918		mg/L		99	80 - 120		0	20

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 860-153844/1-A
Matrix: Water
Analysis Batch: 154012

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 153844

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	U	0.000200	mg/L		04/08/24 23:16	04/09/24 16:50	1

Lab Sample ID: LCS 860-153844/2-A
Matrix: Water
Analysis Batch: 154012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 153844

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00200	0.002040		mg/L		102	80 - 120

Lab Sample ID: LCSD 860-153844/3-A
Matrix: Water
Analysis Batch: 154012

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 153844

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.00200	0.002039		mg/L		102	80 - 120	0	20

Method: 420.4 - Phenolics, Total Recoverable

Lab Sample ID: MB 860-154711/16
Matrix: Water
Analysis Batch: 154711

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total	<0.0100	U	0.0100	mg/L			04/12/24 10:55	1

Lab Sample ID: LCS 860-154711/17
Matrix: Water
Analysis Batch: 154711

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phenols, Total	0.100	0.09790		mg/L		98	90 - 110

Lab Sample ID: LCSD 860-154711/18
Matrix: Water
Analysis Batch: 154711

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenols, Total	0.100	0.1020		mg/L		102	90 - 110	4	20

Lab Sample ID: 880-41793-1 MS
Matrix: Water
Analysis Batch: 154711

Client Sample ID: Windwill
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Phenols, Total	<0.0100	U F1	0.100	<0.0100	U F1	mg/L		0	90 - 110

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method: 420.4 - Phenolics, Total Recoverable (Continued)

Lab Sample ID: 880-41793-1 MSD
Matrix: Water
Analysis Batch: 154711

Client Sample ID: Windwill
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenols, Total	<0.0100	U F1	0.100	<0.0100	U F1	mg/L		0	90 - 110	NC	20

Method: Kelada 01 - Cyanide, Total, Acid Dissociable and Thiocyanate

Lab Sample ID: MB 860-154355/24
Matrix: Water
Analysis Batch: 154355

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.00500	U	0.00500	mg/L			04/11/24 10:30	1

Lab Sample ID: MB 860-154355/65
Matrix: Water
Analysis Batch: 154355

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.00500	U	0.00500	mg/L			04/11/24 12:26	1

Lab Sample ID: LCS 860-154355/26
Matrix: Water
Analysis Batch: 154355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.09006		mg/L		90	90 - 110

Lab Sample ID: LCSD 860-154355/67
Matrix: Water
Analysis Batch: 154355

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.1073		mg/L		107	90 - 110	2	20

Lab Sample ID: LLCS 860-154355/25
Matrix: Water
Analysis Batch: 154355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.0100	0.01167		mg/L		117	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 880-77416/1
Matrix: Water
Analysis Batch: 77416

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<25.0	U	25.0	mg/L			04/04/24 20:44	1

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 880-77416/2					Client Sample ID: Lab Control Sample					
Matrix: Water					Prep Type: Total/NA					
Analysis Batch: 77416										
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Total Dissolved Solids			1000	998.0		mg/L		100	80 - 120	

Lab Sample ID: LCSD 880-77416/3					Client Sample ID: Lab Control Sample Dup					
Matrix: Water					Prep Type: Total/NA					
Analysis Batch: 77416										
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD
Total Dissolved Solids			1000	1000		mg/L		100	80 - 120	0

Lab Sample ID: 880-41793-1 DU					Client Sample ID: Windwill					
Matrix: Water					Prep Type: Total/NA					
Analysis Batch: 77416										
Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD
Total Dissolved Solids	1000			1003		mg/L				0

Method: SM 4500 H+ B - pH

Lab Sample ID: 880-41793-1 DU							Client Sample ID: Windwill				
Matrix: Water							Prep Type: Total/NA				
Analysis Batch: 77415											
	Sample	Sample		DU	DU					RPD	
Analyte	Result	Qualifier		Result	Qualifier	Unit	D			RPD	
pH	7.3	HF		7.3		S.U.				0.1	
Temperature	22.0	HF		22.1		Deg. C				0.5	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

GC/MS VOA

Analysis Batch: 153663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	8260D	
MB 860-153663/10	Method Blank	Total/NA	Water	8260D	
LCS 860-153663/3	Lab Control Sample	Total/NA	Water	8260D	
LCSD 860-153663/4	Lab Control Sample Dup	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 153448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	3511	
MB 860-153448/1-A	Method Blank	Total/NA	Water	3511	
LCS 860-153448/2-A	Lab Control Sample	Total/NA	Water	3511	
LCSD 860-153448/3-A	Lab Control Sample Dup	Total/NA	Water	3511	

Analysis Batch: 154192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-153448/1-A	Method Blank	Total/NA	Water	8270E	153448
LCS 860-153448/2-A	Lab Control Sample	Total/NA	Water	8270E	153448
LCSD 860-153448/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	153448

Analysis Batch: 154487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	8270E	153448

Analysis Batch: 154867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	8270E	153448

GC Semi VOA

Prep Batch: 153141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	3511	
MB 860-153141/1-A	Method Blank	Total/NA	Water	3511	
LCS 860-153141/4-A	Lab Control Sample	Total/NA	Water	3511	
LCSD 860-153141/5-A	Lab Control Sample Dup	Total/NA	Water	3511	

Analysis Batch: 153438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	8082A	153141
MB 860-153141/1-A	Method Blank	Total/NA	Water	8082A	153141
LCS 860-153141/4-A	Lab Control Sample	Total/NA	Water	8082A	153141
LCSD 860-153141/5-A	Lab Control Sample Dup	Total/NA	Water	8082A	153141

HPLC/IC

Analysis Batch: 77357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	300.0	
880-41793-1	Windwill	Total/NA	Water	300.0	
MB 880-77357/3	Method Blank	Total/NA	Water	300.0	
LCS 880-77357/4	Lab Control Sample	Total/NA	Water	300.0	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

HPLC/IC (Continued)

Analysis Batch: 77357 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-77357/5	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 77358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	300.0	
MB 880-77358/3	Method Blank	Total/NA	Water	300.0	
LCS 880-77358/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-77358/5	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 669273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	300.0	
MB 400-669273/53	Method Blank	Total/NA	Water	300.0	
LCS 400-669273/54	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-669273/55	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 153717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	3010A	
MB 860-153717/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-153717/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-153717/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Analysis Batch: 153799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	6020B	153717
MB 860-153717/1-A	Method Blank	Total/NA	Water	6020B	153717
LCS 860-153717/2-A	Lab Control Sample	Total/NA	Water	6020B	153717
LCSD 860-153717/3-A	Lab Control Sample Dup	Total/NA	Water	6020B	153717

Prep Batch: 153844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	7470A	
MB 860-153844/1-A	Method Blank	Total/NA	Water	7470A	
LCS 860-153844/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 860-153844/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	

Analysis Batch: 154012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	7470A	153844
MB 860-153844/1-A	Method Blank	Total/NA	Water	7470A	153844
LCS 860-153844/2-A	Lab Control Sample	Total/NA	Water	7470A	153844
LCSD 860-153844/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	153844

General Chemistry

Analysis Batch: 77415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	SM 4500 H+ B	
880-41793-1 DU	Windwill	Total/NA	Water	SM 4500 H+ B	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

General Chemistry

Analysis Batch: 77416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	SM 2540C	
MB 880-77416/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 880-77416/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 880-77416/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
880-41793-1 DU	Windwill	Total/NA	Water	SM 2540C	

Analysis Batch: 154355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	Kelada 01	
MB 860-154355/24	Method Blank	Total/NA	Water	Kelada 01	
MB 860-154355/65	Method Blank	Total/NA	Water	Kelada 01	
LCS 860-154355/26	Lab Control Sample	Total/NA	Water	Kelada 01	
LCSD 860-154355/67	Lab Control Sample Dup	Total/NA	Water	Kelada 01	
LLCS 860-154355/25	Lab Control Sample	Total/NA	Water	Kelada 01	

Analysis Batch: 154711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	420.4	
MB 860-154711/16	Method Blank	Total/NA	Water	420.4	
LCS 860-154711/17	Lab Control Sample	Total/NA	Water	420.4	
LCSD 860-154711/18	Lab Control Sample Dup	Total/NA	Water	420.4	
880-41793-1 MS	Windwill	Total/NA	Water	420.4	
880-41793-1 MSD	Windwill	Total/NA	Water	420.4	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Client Sample ID: Windwill
Date Collected: 04/03/24 10:15
Date Received: 04/03/24 14:48

Lab Sample ID: 880-41793-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	153663	04/08/24 12:45	NA	EET HOU
Total/NA	Prep	3511			35.00 mL	2.00 mL	153448	04/04/24 16:00	DR	EET HOU
Total/NA	Analysis	8270E		1	1 mL	1 mL	154487	04/12/24 16:15	EM	EET HOU
Total/NA	Prep	3511			35.00 mL	2.00 mL	153448	04/04/24 16:00	DR	EET HOU
Total/NA	Analysis	8270E		1	1 mL	1 mL	154867	04/16/24 00:21	EM	EET HOU
Total/NA	Prep	3511			48.1 mL	5 mL	153141	04/04/24 21:01	DS	EET HOU
Total/NA	Analysis	8082A		1			153438	04/05/24 16:32	WP	EET HOU
Total/NA	Analysis	300.0		5	10 mL	10 mL	77357	04/04/24 19:24	SMC	EET MID
Total/NA	Analysis	300.0		1	10 mL	10 mL	77357	04/04/24 19:41	SMC	EET MID
Total/NA	Analysis	300.0		1	10 mL	10 mL	77358	04/04/24 19:41	SMC	EET MID
Total/NA	Analysis	300.0		1	10 mL	10 mL	669273	04/25/24 16:53	LHB	EET PEN
Total/NA	Prep	3010A			50 mL	50 mL	153717	04/08/24 10:30	MD	EET HOU
Total/NA	Analysis	6020B		1			153799	04/08/24 17:36	SHZ	EET HOU
Total/NA	Prep	7470A			50 mL	50 mL	153844	04/08/24 23:16	AGR	EET HOU
Total/NA	Analysis	7470A		1			154012	04/09/24 17:16	SHZ	EET HOU
Total/NA	Analysis	420.4		1	10 mL	10 mL	154711	04/12/24 11:33	ADL	EET HOU
Total/NA	Analysis	Kelada 01		1	50 mL	50 mL	154355	04/11/24 11:25	ADL	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	77416	04/04/24 20:44	SMC	EET MID
Total/NA	Analysis	SM 4500 H+ B		1			77415	04/04/24 20:18	SMC	EET MID

Laboratory References:
EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440
EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
SM 4500 H+ B		Water	Temperature

Laboratory: Eurofins Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215	06-30-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
420.4		Water	Phenols, Total
6020B	3010A	Water	Uranium
8270E	3511	Water	1-Methylnaphthalene

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-24
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-00689	08-01-24
California	State	2510	06-30-24
Florida	NELAP	E81010	06-30-24
Georgia	State	E81010(FL)	06-30-24
Illinois	NELAP	200041	10-09-24
Kansas	NELAP	E-10253	10-31-24
Kentucky (UST)	State	53	06-30-24
Louisiana (All)	NELAP	30976	06-30-24
Louisiana (DW)	State	LA017	12-31-24
North Carolina (WW/SW)	State	314	12-31-24
Oklahoma	NELAP	9810	08-31-24
Pennsylvania	NELAP	68-00467	01-31-25
South Carolina	State	96026	06-30-24
Tennessee	State	TN02907	06-30-24
Texas	NELAP	T104704286	09-30-24
US Fish & Wildlife	US Federal Programs	A22340	06-30-24
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-24
West Virginia DEP	State	136	03-31-25

Method Summary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET HOU
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET HOU
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET MID
300.0	Anions, Ion Chromatography	EPA	EET PEN
6020B	Metals (ICP/MS)	SW846	EET HOU
7470A	Mercury (CVAA)	SW846	EET HOU
420.4	Phenolics, Total Recoverable	EPA	EET HOU
Kelada 01	Cyanide, Total, Acid Dissociable and Thiocyanate	EPA	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET MID
SM 4500 H+ B	pH	SM	EET MID
3010A	Preparation, Total Metals	SW846	EET HOU
3511	Microextraction of Organic Compounds	SW846	EET HOU
5030C	Purge and Trap	SW846	EET HOU
7470A	Preparation, Mercury	SW846	EET HOU

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-41793-1	Windwill	Water	04/03/24 10:15	04/03/24 14:48

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Varson & Associates, Inc.
Environmental Consultants

507 N. Morienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 4/3/2024
PO# _____
PROJECT LOCATION OR NAME Drache/EGD U 37
LAI PROJECT # 19-0112-49 COLLECTOR ML



880-41793 Chain of Custody

No. 3238
ISTODY

Data Reported to

Mark Varson/Robert Nelson

TRRP report?
☐ Yes ☒ No

S=SOIL
W=WATER
A=AIR
P=PAINT
SL=SLUDGE
OT=OTHER

TIME ZONE
Time zone/State
Mtn/MN

Field
Sample I D

Lab #

Date

Time

Matrix

of Containers

HCl

HNO₃

H₂SO₄ ☐ NaOH ☐

ICE

UNPRESERVED

ANALYSES
BTEX ☐ MTBE ☐
TRPH 418 T ☐ TPH 1005 ☐ TPH 1006 ☐
GASOLINE MOD 8015 ☐
DIESEL - MOD 8015 ☐
OIL - MOD 8015 ☐
VOC 8260 ☐
SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
8081 PESTICIDES ☐ 8151 HERBICIDES ☐
8082 PCBs ☐
TCPP - METALS (RCRA) ☐ Semi-VOC ☐
TCPP - PEST ☐ HERB ☐ OTHER LIST ☐
TOTAL METALS (RCRA) ☐ DW 200 8 ☐ TCLP ☐
LEAD - TOTAL ☐ TOX ☐ FLASHPOINT ☐
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
PH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PECHLORATE ☐
CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

See attached
3103 Parameter
Bill Aspelberg
(Bruce Bahen)

TOTAL

RELINQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

RELINQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

RELINQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

LABORATORY X CHCO

TURN AROUND TIME

NORMAL ☒

1 DAY ☐

2 DAY ☐

OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP 30/35

CUSTODY SEALS - ☐ BROKEN ☒ CONTACT ☐ NOT USED

CARRIER BILL # _____

☒ HAND DELIVERED

(a)	Antimony (Sb) (CAS 7440-36-0)	0.006 mg/l
(b)	Arsenic (As) (CAS 7440-38-2)	0.01 mg/l
(c)	Barium (Ba) (CAS 7440-39-3)	2 mg/l
(d)	Beryllium (Be) (CAS 7440-41-7)	0.004 mg/l
(e)	Cadmium (Cd) (CAS 7440-43-9)	0.005 mg/l
(f)	Chromium (Cr) (CAS 7440-47-3)	0.05 mg/l

(1) Numerical Standards
A. Human Health Standards

LESS: The following standards are the allowable pH range and the maximum allowable concentration in ground water for the contaminants specified unless the existing condition exceeds the standard or unless otherwise provided in Subsection E of Section 20.6.2.3109 NMAC. Regardless of whether there is one contaminant or more than one contaminant present in ground water, when an existing pH or concentration of any water contaminant exceeds the standard specified in Subsection A, B, or C of this section, the existing pH or concentration shall be the allowable limit, provided that the discharge at such concentrations will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the standards of this section. These standards shall apply to the dissolved portion of the contaminants specified with a definition of dissolved being that given in the publication "methods for chemical analysis of water and waste of the U.S. environmental protection agency," with the exception that standards for mercury, organic compounds and non-aqueous phase liquids shall apply to the total nonfiltered concentrations of the contaminants. If the secretary determines that there is a reasonable probability of facilitated contaminant transport by colloids or organic macromolecules, or that proper filtration procedures are not being followed, the discharger may be required to test for both filtered and nonfiltered portions of inorganic contaminants to develop appropriate protocol for monitoring contaminants that have the potential to migrate through the aquifer.

20.6.2.3103 STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR

20.6.2.3102: [RESERVED]
[12-1-95, 20.6.2.3102 NMAC - Rn, 20 NMAC 6.2 II 3102, 1-15-01]

20.6.2.3101 PURPOSE:
The purpose of Sections 20.6.2.3000 through 20.6.2.3114 NMAC controlling discharges onto or below the surface of the ground is to protect all ground water of the state of New Mexico which has an existing concentration of 10,000 mg/l or less TDS, for present and potential future use as domestic and agricultural water supply, and to protect those segments of surface waters which are gaining because of ground water inflow, for uses designated in the New Mexico Water Quality Standards. Sections 20.6.2.3000 through 20.6.2.3114 NMAC are written so that in general.

(1) If the existing concentration of any water contaminant in ground water is in conformance with the standard of 20.6.2.3103 NMAC, degradation of the ground water up to the limit of the standard will be allowed; and

(2) If the existing concentration of any water contaminant in ground water exceeds the standard of Section 20.6.2.3103 NMAC, no degradation of the ground water beyond the existing concentration will be allowed.

B. Ground water standards are numbers that represent the pH range and maximum concentrations of water contaminants in the ground water which still allow for the present and future use of ground water resources.

C. The standards are not intended as maximum ranges and concentrations for use, and nothing herein contained shall be construed as limiting the use of waters containing higher ranges and concentrations

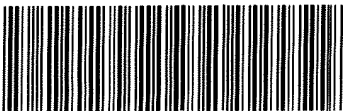
[2-18-77; 20.6.2.3101 NMAC - Rn, 20 NMAC 6.2 II 3101, 1-15-01]

20.6.2.3001 - 20.6.2.3100: [RESERVED]
[12-1-95, 20.6.2.3001 - 20.6.2.3100 NMAC - Rn, 20 NMAC 6.2 II 2202-3100, 1-15-01]

20.6.2.3000 PERMITTING AND GROUND WATER STANDARDS:
[12-1-95, 20.6.2.3000 NMAC - Rn, 20 NMAC 6.2 II, 1-15-01]

20.6.2.2202 - 20.6.2.2999: [RESERVED]
[12-1-95, 20.6.2.2202 - 20.6.2.2999 NMAC - Rn, 20 NMAC 6.2 II 2202-3100, 1-15-01]

880-41793 Chain of Custody



20

20.6.2 NMAC

(g)	Cyanide (CN) (CAS 57-12-5)	0.2 mg/l
(h)	Fluoride (F) (CAS 16984-48-8)	1.6 mg/l
(i)	Lead (Pb) (CAS 7439-92-1)	0.015 mg/l
(j)	Total Mercury (Hg) (CAS 7439-97-6)	0.002 mg/l
(k)	Nitrate (NO ₃ as N) (CAS 14797-55-8)	10.0 mg/l
(l)	Nitrite (NO ₂ as N) (CAS 10102-44-0)	1.0 mg/l
(m)	Selenium (Se) (CAS 7782-49-2)	0.05 mg/l
(n)	Silver (Ag) (CAS 7440-224)	0.05 mg/l
(o)	Thallium (Tl) (CAS 7440-28-0)	0.002 mg/l
(p)	Uranium (U) (CAS 7440-61-1)	0.03 mg/l
(q)	Radioactivity Combined Radium-226 (CAS 13982-63-3) and Radium-228 (CAS 15262-20-1)	5 pCi/l
(r)	Benzene (CAS 71-43-2)	0.005 mg/l
(s)	Polychlorinated biphenyls (PCBs) (CAS 1336-36-3)	0.0005 mg/l
(t)	Toluene (CAS 108-88-3)	1 mg/l
(u)	Carbon Tetrachloride (CAS 56-23-5)	0.005 mg/l
(v)	1,2-dichloroethane (EDC) (CAS 107-06-2)	0.005 mg/l
(w)	1,1-dichloroethylene (1,1-DCE) (CAS 75-35-4)	0.007 mg/l
(x)	tetrachloroethylene (PCE) (CAS 127-18-4)	0.005 mg/l
(y)	trichloroethylene (TCE) (CAS 79-01-6)	0.005 mg/l
(z)	ethylbenzene (CAS 100-41-4)	0.7 mg/l
(aa)	total xylenes (CAS 1330-20-7)	0.62 mg/l
(bb)	methylene chloride (CAS 75-09-2)	0.005 mg/l
(cc)	chloroform (CAS 67-66-3)	0.1 mg/l
(dd)	1,1-dichloroethane (CAS 75-34-3)	0.025 mg/l
(ee)	ethylene dibromide (EDB) (CAS 106-93-4)	0.00005 mg/l
(ff)	1,1,1-trichloroethane (CAS 71-55-6)	0.2 mg/l
(gg)	1,1,2-trichloroethane (CAS 79-00-5)	0.005 mg/l
(hh)	1,1,2,2-tetrachloroethane (CAS 79-34-5)	0.01 mg/l
(ii)	vinyl chloride (CAS 75-01-4)	0.002 mg/l
(jj)	PAHs total naphthalene (CAS 91-20-3) plus monomethylnaphthalenes	0.03 mg/l
(kk)	benzo-a-pyrene (CAS 50-32-8)	0.0002 mg/l
(ll)	cis-1,2-dichloroethene (CAS 156-59-2)	0.07 mg/l
(mm)	trans-1,2-dichloroethene (CAS 156-60-5)	0.1 mg/l
(nn)	1,2-dichloropropane (PDC) (CAS 78-87-5)	0.005 mg/l
(oo)	styrene (CAS 100-42-5)	0.1 mg/l
(pp)	1,2-dichlorobenzene (CAS 95-50-1)	0.6 mg/l
(qq)	1,4-dichlorobenzene (CAS 106-46-7)	0.075 mg/l
(rr)	1,2,4-trichlorobenzene (CAS 120-82-1)	0.07 mg/l
(ss)	pentachlorophenol (CAS 87-86-5)	0.001 mg/l
(tt)	atrazine (CAS 1912-24-9)	0.003 mg/l
(2)	Standards for Toxic Pollutants. A toxic pollutant shall not be present at a concentration shown by credible scientific data and other evidence appropriate under the Water Quality Act, currently available to the public, to have potential for causing one or more of the following effects upon exposure, ingestion, or assimilation either directly from the environment or indirectly by ingestion through food chains. (1) unreasonably threatens to injure human health, or the health of animals or plants which are commonly hatched, bred, cultivated or protected for use by man for food or economic benefit; as used in this definition injuries to health include death, histopathologic change, clinical symptoms of disease, behavioral abnormalities, genetic mutation, physiological malfunctions or physical deformations in such organisms or their offspring, or (2) creates a lifetime risk of more than one cancer per 100,000 exposed persons	
(3)	Standards for Non-Aqueous Phase Liquids. Non-aqueous phase liquid shall not be present floating atop of or immersed within ground water, as can be reasonably measured.	
(1)	Chloride (Cl) (CAS 16887-00-6)	250.0 mg/l
(2)	Copper (Cu) (CAS 7440-50-8)	1.0 mg/l
(3)	Iron (Fe) (CAS 7439-89-6)	1.0 mg/l

B. Other Standards for Domestic Water Supply

41793

20 6 2 NMAC

in this section, arroyos and ephemeral streams are not exempt from the discharge permit requirement, except as otherwise provided

E. Effluent which is discharged to a watercourse which is naturally perennial; discharges to dry source of the water diverted was not mine workings, and that the secretary has not determined that a hazard to public health may result;

D. Discharges resulting from the transport or storage of water diverted, provided that the water diverted has not had added to it after the point of diversion any effluent received from a sewerage system, that the received directly from any sewerage system,

C. Water used for irrigated agriculture, for watering of lawns, trees, gardens or shrubs, or for irrigation for a period not to exceed five years for the revegetation of any disturbed land area, unless that water is regulations,

B. Effluent which is regulated pursuant to 20 7 3 NMAC, "Liquid Waste Disposal and Treatment" to obtain the appropriate samples, this exemption shall not apply;

A. Effluent or leachate which conforms to all the standards in Subsections A, B, and C of Section 20 6 2 3103 NMAC and has a total nitrogen concentration of 10 mg/l or less. To determine conformance, samples may be taken by the agency before the effluent or leachate is discharged so that it may move directly or indirectly into ground water; provided that if the discharge is by seepage through non-natural or altered natural materials, the agency may take samples of the solution before or after seepage. If for any reason the agency does not have access

20.6.2.3105 EXEMPTIONS FROM DISCHARGE PERMIT REQUIREMENT: Sections 20 6 2 3104 and 20 6 2 3106 NMAC do not apply to the following

A. Effluent or leachate which conforms to all the standards in Subsections A, B, and C of Section 20 6 2 3103 NMAC and has a total nitrogen concentration of 10 mg/l or less. To determine conformance, samples may be taken by the agency before the effluent or leachate is discharged so that it may move directly or indirectly into ground water; provided that if the discharge is by seepage through non-natural or altered natural materials, the agency may take samples of the solution before or after seepage. If for any reason the agency does not have access to obtain the appropriate samples, this exemption shall not apply;

B. Effluent which is regulated pursuant to 20 7 3 NMAC, "Liquid Waste Disposal and Treatment"

20.6.2.3104 DISCHARGE PERMIT REQUIRED: Unless otherwise provided by this Part, no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water unless he is discharging pursuant to a discharge permit issued by the secretary. When a permit has been issued, discharges must be consistent with the terms and conditions of the permit. In the event of a transfer of the ownership, control, or possession of a facility for which a discharge permit is in effect, the transferee shall have authority to discharge under such permit, provided that the transferee has complied with Section 20 6 2 3111 NMAC, regarding transfers [2-18-77, 12-24-87, 12-1-95, Rn & A, 20.6.2.3104 NMAC - 20 NMAC 6.2.III 3104, 1-15-01, A, 12-1-01]

20.6.2.3105 EXEMPTIONS FROM DISCHARGE PERMIT REQUIREMENT: Sections 20 6 2 3104 and 20 6 2 3106 NMAC do not apply to the following

A. Effluent or leachate which conforms to all the standards in Subsections A, B, and C of Section 20 6 2 3103 NMAC and has a total nitrogen concentration of 10 mg/l or less. To determine conformance, samples may be taken by the agency before the effluent or leachate is discharged so that it may move directly or indirectly into ground water; provided that if the discharge is by seepage through non-natural or altered natural materials, the agency may take samples of the solution before or after seepage. If for any reason the agency does not have access to obtain the appropriate samples, this exemption shall not apply;

B. Effluent which is regulated pursuant to 20 7 3 NMAC, "Liquid Waste Disposal and Treatment"

Standards for Irrigation Use - Ground water shall meet the standards of Subsection A, B, and C of this section unless otherwise provided.

(1) Aluminum (Al) (CAS 7429-90-5) 5 0 mg/l

(2) Boron (B) (CAS 7440-42-8) 0 75 mg/l

(3) Cobalt (Co) (CAS 7440-48-4) 0 05 mg/l

(4) Molybdenum (Mo) (CAS 7439-98-7) 1 0 mg/l

(5) Nickel (Ni) (CAS 7440-02-0) 0 2 mg/l

D. For purposes of application of the amended numeric standards for arsenic, cadmium, lead, combined radium-226 & radium-228, benzene, PCBs, carbon tetrachloride, EDC, PCE, TCE, ethylbenzene, combined radium-226 & radium-228, benzene, PCBs, carbon tetrachloride, EDC, PCE, TCE, ethylbenzene and benzo-a-pyrene shall not apply unless the secretary notifies the responsible person that the site is a source of these contaminants in ground water that pose a hazard to public health

[2-18-77, 1-29-82, 11-17-83, 3-3-86, 12-1-95, 20 6 2 3103 NMAC - Rn, 20 NMAC 6.2.III 3103, 1-15-01, A, 9-26-04, A, 12-21-18]

[Note. For purposes of application of the amended numeric uranium standard to past and current water discharges (as of 9-26-04), the new standard will not become effective until June 1, 2007.]

(4) Manganese (Mn) (CAS 7439-96-5) 0 2 mg/l

(5) Phenols 0 005 mg/l

(6) Sulfate (SO₄) (CAS 14808-79-8) 600 0 mg/l

(7) Total Dissolved Solids (TDS) 1000 0 mg/l

(8) Zinc (Zn) (CAS 7440-66-6) 10 0 mg/l

(9) pH between 6 and 9

(10) Methyl tertiary-butyl ether (MTBE) (CAS 1634-04-4) 0 1 mg/l

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Eurofins Midland

1211 W Florida Ave
Midland TX 79701
Phone: 432-704-5440

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler	Lab P#: Taylor Holly	Carrie Tracking Not(s):	COC Nr: 880-9763.1
Client Contact:	Phone:	E-Mail:	Holly Taylor@et.eurofinsus.com	State of Origin:	New Mexico
Shipping/Receiving		Accreditations Required (See note): NELAP Texas		Page:	Page 1 of 1
Company:		Eurofins Environment Testing South Cent		Job #:	880-41793-1
Address:		4145 Greenbriar Dr	Due Date Requested:	4/9/2024	
City:		Stafford	TAT Requested (days):		
State, Zip:		TX, 77477	PO #:		
Phone:		281-240-4200(Tel)	WFO #:		
Email:			Project #:	88000254	
Project Name:		Apache/EBDU 37	SSOW#:		
Site:					
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastwater, B=biomass, A=air)
Windmill (880-41793-1)	4/3/24	10:15	Mountain	Water	
PAH + Atrazine, Pentachlorophenol					
Special Instructions/Note:					
Handwritten: H-2368, 3.34					
Analysis Requested					
Kelada_01/ Cyanide					
6020B/3010A Metals (19) + U					
7470A/7470A_Prep Mercury					
8260D/6030C Full List VOCs					
8082A/3511 Standard PCBs					
8270E_QQ/3511 (MOD) Polycyclic Aromatic Hydrocarbons (					
420.4_NP					
Preservation Codes:					
A HCL M Hexane					
B NaOH N None					
C Zn Acetate O AsHClO2					
D Nitric Acid P Na2CO3					
E MeOH Q Na2SO3					
F MeOH R Na2S2O3					
G Amchlor S H2SO4					
H Acetic Acid T TSP Dodecylhydrate					
I Ice U Acetone					
J DI Water V MCAA					
K EDTA W pH 4-5					
L EDA Y Trizma					
Z other (specify)					
Other					
Sample Identification - Client ID (Lab ID)					
Windmill (880-41793-1)					
4/3/24					
10:15					
Mountain					
Water					
X X X X X X X X X X					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Return To Client Disposal By Lab Archive For Months					
Special Instructions/QC Requirements:					
Empty Kit Relinquished by:					
Relinquished by:					
Relinquished by:					
Relinquished by:					
Custody/Seals Intact: Custody/Seal No.					
Delta Yes Delta No					

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-41793-1
SDG Number: 19-0112-49

Login Number: 41793
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-41793-1
SDG Number: 19-0112-49

Login Number: 41793
List Number: 2
Creator: Baker, Jeremiah

List Source: Eurofins Houston
List Creation: 04/04/24 12:52 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-41793-1

SDG Number: 19-0112-49

Login Number: 41793

List Number: 4

Creator: Earnest, Tamantha

List Source: Eurofins Pensacola

List Creation: 04/22/24 03:02 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 5/3/2024 10:38:04 AM

JOB DESCRIPTION

Apache/EBDU 37
19-0112-49

JOB NUMBER

880-41793-2

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701



Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Holly Taylor

Generated
5/3/2024 10:38:04 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Laboratory Job ID: 880-41793-2
SDG: 19-0112-49

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-2
SDG: 19-0112-49

Qualifiers

Rad	
Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project: Apache/EBDU 37

Job ID: 880-41793-2

Job ID: 880-41793-2

Eurofins Midland

Job Narrative
880-41793-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 4/3/2024 2:48 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.5°C.

Gas Flow Proportional Counter

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-2
SDG: 19-0112-49

Client Sample ID: Windwill
Date Collected: 04/03/24 10:15
Date Received: 04/03/24 14:48

Lab Sample ID: 880-41793-1
Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)										
Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.344		0.154	0.157	1.00	0.159	pCi/L	04/08/24 10:35	04/30/24 09:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.5		30 - 110					04/08/24 10:35	04/30/24 09:42	1
Method: EPA 904.0 - Radium-228 (GFPC)										
Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.601		0.402	0.406	1.00	0.596	pCi/L	04/08/24 10:40	04/28/24 11:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.5		30 - 110					04/08/24 10:40	04/28/24 11:39	1
Y Carrier	70.3		30 - 110					04/08/24 10:40	04/28/24 11:39	1

Tracer/Carrier Summary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-2
SDG: 19-0112-49

Method: 903.0 - Radium-226 (GFPC)
Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)							
		Ba							
Lab Sample ID	Client Sample ID	(30-110)							
880-41793-1	Windwill	90.5							
LCS 160-655852/2-A	Lab Control Sample	94.0							
MB 160-655852/1-A	Method Blank	102							
Tracer/Carrier Legend									
Ba = Ba Carrier									

Method: 904.0 - Radium-228 (GFPC)
Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)							
		Ba	Y						
Lab Sample ID	Client Sample ID	(30-110)	(30-110)						
880-41793-1	Windwill	90.5	70.3						
LCS 160-655853/2-A	Lab Control Sample	94.0	86.0						
MB 160-655853/1-A	Method Blank	102	89.3						
Tracer/Carrier Legend									
Ba = Ba Carrier									
Y = Y Carrier									

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-2
SDG: 19-0112-49

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-655852/1-A

Matrix: Water

Analysis Batch: 659273

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 655852

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.07913	U	0.0935	0.0938	1.00	0.152	pCi/L	04/08/24 10:35	04/30/24 09:41	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		30 - 110					04/08/24 10:35	04/30/24 09:41	1

Lab Sample ID: LCS 160-655852/2-A

Matrix: Water

Analysis Batch: 659273

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 655852

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226		11.3	9.865		1.14	1.00	0.146	pCi/L	87	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	94.0		30 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-655853/1-A

Matrix: Water

Analysis Batch: 659062

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 655853

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.08801	U	0.276	0.276	1.00	0.490	pCi/L	04/08/24 10:40	04/28/24 11:39	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		30 - 110					04/08/24 10:40	04/28/24 11:39	1
Y Carrier	89.3		30 - 110					04/08/24 10:40	04/28/24 11:39	1

Lab Sample ID: LCS 160-655853/2-A

Matrix: Water

Analysis Batch: 659062

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 655853

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228		8.99	9.634		1.28	1.00	0.435	pCi/L	107	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	94.0		30 - 110							
Y Carrier	86.0		30 - 110							

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-2
SDG: 19-0112-49

Rad

Prep Batch: 655852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	PrecSep-21	
MB 160-655852/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-655852/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 655853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-41793-1	Windwill	Total/NA	Water	PrecSep_0	
MB 160-655853/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-655853/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-2
SDG: 19-0112-49

Client Sample ID: Windwill
Date Collected: 04/03/24 10:15
Date Received: 04/03/24 14:48

Lab Sample ID: 880-41793-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.46 mL	1.0 g	655852	04/08/24 10:35	KAK	EET SL
Total/NA	Analysis	903.0		1	1.0 mL	1.0 mL	659273	04/30/24 09:42	SCB	EET SL
Total/NA	Prep	PrecSep_0			999.46 mL	1.0 g	655853	04/08/24 10:40	KAK	EET SL
Total/NA	Analysis	904.0		1			659062	04/28/24 11:39	SCB	EET SL

Laboratory References:
EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-2
SDG: 19-0112-49

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-08-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-24
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-24
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-24
HI - RadChem Recognition	State	n/a	06-30-24
Illinois	NELAP	200023	11-30-24
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-24
Kentucky (DW)	State	KY90125	12-31-24
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-24
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-24
Louisiana (DW)	State	LA011	12-31-24
Maryland	State	310	09-30-24
Massachusetts	State	M-MO054	06-30-24
MI - RadChem Recognition	State	9005	06-30-24
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-24
New Jersey	NELAP	MO002	06-30-24
New Mexico	State	MO00054	06-30-24
New York	NELAP	11616	03-31-25
North Carolina (DW)	State	29700	07-31-24
North Dakota	State	R-207	06-30-24
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-25
South Carolina	State	85002001	06-30-24
Texas	NELAP	T104704193	07-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-24
Virginia	NELAP	10310	06-15-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	10-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-2
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Apache/EBDU 37

Job ID: 880-41793-2
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-41793-1	Windwill	Water	04/03/24 10:15	04/03/24 14:48

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- 14

Varson & Associates, Inc.
Environmental Consultants

507 N. Morienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 4/3/2024
PO# _____
PROJECT LOCATION OR NAME Drache/EGD U37
LAI PROJECT # 19-0112-49 COLLECTOR ML



880-41793 Chain of Custody

No. 3238
ISTODY

Data Reported to

Mark Varson/Robert Nelson

TRRP report?
☐ Yes ☒ No

S=SOIL
W=WATER
A=AIR
P=PAINT
SL=SLUDGE
OT=OTHER

TIME ZONE
Time zone/State
Mtn/MN

Field
Sample ID

Lab #

Date

Time

Matrix

of Containers

HCl

HNO₃

H₂SO₄ ☐ NaOH ☐

ICE

UNPRESERVED

ANALYSES
BTEX ☐ MTBE ☐

TRPH 418 T ☐ TPH 1005 ☐ TPH 1006 ☐

GASOLINE MOD 8015 ☐

DIESEL - MOD 8015 ☐

OIL - MOD 8015 ☐

VOC 8260 ☐

SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐

8081 PESTICIDES ☐ 8151 HERBICIDES ☐

8082 PCBs ☐

TCLP - METALS (RCRA) ☐ TCLP VOC ☐

TCLP - PEST ☐ HERB ☐ Semi-VOC ☐

TOTAL METALS (RCRA) ☐ OTHER LIST ☐

LEAD - TOTAL ☐ DW 200.8 ☐ TCLP ☐

RQ ☐ TOX ☐ FLASHPOINT ☐

TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐

pH ☐ HEXAVALENT CHROMIUM ☐

EXPLOSIVES ☐ PECHLORATE ☐

CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

See attached
3103 parameters
Bill Aspelberg
(Bruce Bahen)

TOTAL

RELINQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

RELINQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

RELINQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

LABORATORY X CHCO

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 30/35 THERM# 108-10

CUSTODY SEALS - ☐ BROKEN ☒ CONTACT ☐ NOT USED

CARRIER BILL # _____

☒ HAND DELIVERED

(a)	Antimony (Sb) (CAS 7440-36-0)	0.006 mg/l
(b)	Arsenic (As) (CAS 7440-38-2)	0.01 mg/l
(c)	Barium (Ba) (CAS 7440-39-3)	2 mg/l
(d)	Beryllium (Be) (CAS 7440-41-7)	0.004 mg/l
(e)	Cadmium (Cd) (CAS 7440-43-9)	0.005 mg/l
(f)	Chromium (Cr) (CAS 7440-47-3)	0.05 mg/l

(1) Numerical Standards
A. Human Health Standards

LESS: The following standards are the allowable pH range and the maximum allowable concentration in ground water for the contaminants specified unless the existing condition exceeds the standard or unless otherwise provided in Subsection E of Section 20.6.2.3109 NMAC. Regardless of whether there is one contaminant or more than one contaminant present in ground water, when an existing pH or concentration of any water contaminant exceeds the standard specified in Subsection A, B, or C of this section, the existing pH or concentration shall be the allowable limit, provided that the discharge at such concentrations will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the standards of this section. These standards shall apply to the dissolved portion of the contaminants specified with a definition of dissolved being that given in the publication "methods for chemical analysis of water and waste of the U.S. environmental protection agency," with the exception that standards for mercury, organic compounds and non-aqueous phase liquids shall apply to the total nonfiltered concentrations of the contaminants. If the secretary determines that there is a reasonable probability of facilitated contaminant transport by colloids or organic macromolecules, or that proper filtration procedures are not being followed, the discharger may be required to test for both filtered and nonfiltered portions of inorganic contaminants to develop appropriate protocol for monitoring contaminants that have the potential to migrate through the aquifer.

20.6.2.3103 STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR

[12-1-95, 20.6.2.3102 NMAC - Rn, 20 NMAC 6.2 II 3102, 1-15-01]
20.6.2.3102: [RESERVED]

[2-18-77; 20.6.2.3101 NMAC - Rn, 20 NMAC 6.2 II 3101, 1-15-01]
The standards are not intended as maximum ranges and concentrations for use, and nothing herein contained shall be construed as limiting the use of waters containing higher ranges and concentrations

C. Ground water standards are numbers that represent the pH range and maximum concentrations of water contaminants in the ground water which still allow for the present and future use of ground water resources

B. If the existing concentration of any water contaminant in ground water exceeds the standard of Section 20.6.2.3103 NMAC, no degradation of the ground water beyond the existing concentration will be allowed.

(2) If the existing concentration of any water contaminant in ground water exceeds the standard of 20.6.2.3103 NMAC, degradation of the ground water up to the limit of the standard will be allowed; and

(1) If the existing concentration of any water contaminant in ground water is in conformance with the standard of 20.6.2.3103 NMAC, degradation of the ground water up to the limit of the standard will be written so that in general.

A. The purpose of Sections 20.6.2.3000 through 20.6.2.3114 NMAC controlling discharges onto or below the surface of the ground is to protect all ground water of the state of New Mexico which has an existing concentration of 10,000 mg/l or less TDS, for present and potential future use as domestic and agricultural water supply, and to protect those segments of surface waters which are gaining because of ground water inflow, for uses designated in the New Mexico Water Quality Standards. Sections 20.6.2.3000 through 20.6.2.3114 NMAC are

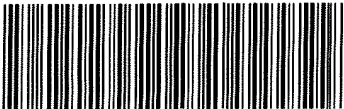
PURPOSE: 20.6.2.3101

[12-1-95, 20.6.2.3001 - 20.6.2.3100 NMAC - Rn, 20 NMAC 6.2 II 2202-3100, 1-15-01]
20.6.2.3001 - 20.6.2.3100: [RESERVED]

[12-1-95, 20.6.2.3000 NMAC - Rn, 20 NMAC 6.2 II, 1-15-01]
20.6.2.3000 PERMITTING AND GROUND WATER STANDARDS:

[12-1-95, 20.6.2.2202 - 20.6.2.2999 NMAC - Rn, 20 NMAC 6.2 II 2202-3100, 1-15-01]
20.6.2.2202 - 20.6.2.2999: [RESERVED]

880-41793 Chain of Custody



20

20.6.2 NMAC

(g)	Cyanide (CN) (CAS 57-12-5)	0.2 mg/l
(h)	Fluoride (F) (CAS 16984-48-8)	1.6 mg/l
(i)	Lead (Pb) (CAS 7439-92-1)	0.015 mg/l
(j)	Total Mercury (Hg) (CAS 7439-97-6)	0.002 mg/l
(k)	Nitrate (NO ₃ as N) (CAS 14797-55-8)	10.0 mg/l
(l)	Nitrite (NO ₂ as N) (CAS 10102-44-0)	1.0 mg/l
(m)	Selenium (Se) (CAS 7782-49-2)	0.05 mg/l
(n)	Silver (Ag) (CAS 7440-224)	0.05 mg/l
(o)	Thallium (Tl) (CAS 7440-28-0)	0.002 mg/l
(p)	Uranium (U) (CAS 7440-61-1)	0.03 mg/l
(q)	Radioactivity Combined Radium-226 (CAS 13982-63-3) and Radium-228 (CAS 15262-20-1)	5 pCi/l
(r)	Benzene (CAS 71-43-2)	0.005 mg/l
(s)	Polychlorinated biphenyls (PCBs) (CAS 1336-36-3)	0.0005 mg/l
(t)	Toluene (CAS 108-88-3)	1 mg/l
(u)	Carbon Tetrachloride (CAS 56-23-5)	0.005 mg/l
(v)	1,2-dichloroethane (EDC) (CAS 107-06-2)	0.005 mg/l
(w)	1,1-dichloroethylene (1,1-DCE) (CAS 75-35-4)	0.007 mg/l
(x)	tetrachloroethylene (PCE) (CAS 127-18-4)	0.005 mg/l
(y)	trichloroethylene (TCE) (CAS 79-01-6)	0.005 mg/l
(z)	ethylbenzene (CAS 100-41-4)	0.7 mg/l
(aa)	total xylenes (CAS 1330-20-7)	0.62 mg/l
(bb)	methylene chloride (CAS 75-09-2)	0.005 mg/l
(cc)	chloroform (CAS 67-66-3)	0.1 mg/l
(dd)	1,1-dichloroethane (CAS 75-34-3)	0.025 mg/l
(ee)	ethylene dibromide (EDB) (CAS 106-93-4)	0.00005 mg/l
(ff)	1,1,1-trichloroethane (CAS 71-55-6)	0.2 mg/l
(gg)	1,1,2-trichloroethane (CAS 79-00-5)	0.005 mg/l
(hh)	1,1,2,2-tetrachloroethane (CAS 79-34-5)	0.01 mg/l
(ii)	vinyl chloride (CAS 75-01-4)	0.002 mg/l
(jj)	PAHs total naphthalene (CAS 91-20-3) plus monomethylnaphthalenes	0.03 mg/l
(kk)	benzo-a-pyrene (CAS 50-32-8)	0.0002 mg/l
(ll)	cis-1,2-dichloroethene (CAS 156-59-2)	0.07 mg/l
(mm)	trans-1,2-dichloroethene (CAS 156-60-5)	0.1 mg/l
(nn)	1,2-dichloropropane (PDC) (CAS 78-87-5)	0.005 mg/l
(oo)	styrene (CAS 100-42-5)	0.1 mg/l
(pp)	1,2-dichlorobenzene (CAS 95-50-1)	0.6 mg/l
(qq)	1,4-dichlorobenzene (CAS 106-46-7)	0.075 mg/l
(rr)	1,2,4-trichlorobenzene (CAS 120-82-1)	0.07 mg/l
(ss)	pentachlorophenol (CAS 87-86-5)	0.001 mg/l
(tt)	atrazine (CAS 1912-24-9)	0.003 mg/l
(2)	Standards for Toxic Pollutants. A toxic pollutant shall not be present at a concentration shown by credible scientific data and other evidence appropriate under the Water Quality Act, currently available to the public, to have potential for causing one or more of the following effects upon exposure, ingestion, or assimilation either directly from the environment or indirectly by ingestion through food chains. (1) unreasonably threatens to injure human health, or the health of animals or plants which are commonly hatched, bred, cultivated or protected for use by man for food or economic benefit; as used in this definition injuries to health include death, histopathologic change, clinical symptoms of disease, behavioral abnormalities, genetic mutation, physiological malfunctions or physical deformations in such organisms or their offspring, or (2) creates a lifetime risk of more than one cancer per 100,000 exposed persons	
(3)	Standards for Non-Aqueous Phase Liquids. Non-aqueous phase liquid shall not be present floating atop of or immersed within ground water, as can be reasonably measured.	
(1)	Chloride (Cl) (CAS 16887-00-6)	250.0 mg/l
(2)	Copper (Cu) (CAS 7440-50-8)	1.0 mg/l
(3)	Iron (Fe) (CAS 7439-89-6)	1.0 mg/l

B. Other Standards for Domestic Water Supply

41793

20 6 2 NMAC

in this section, arroyos and ephemeral streams are not exempt from the discharge permit requirement, except as otherwise provided

E. Effluent which is discharged to a watercourse which is naturally perennial; discharges to dry source of the water diverted was not mine workings, and that the secretary has not determined that a hazard to public health may result;

D. Discharges resulting from the transport or storage of water diverted, provided that the water diverted has not had added to it after the point of diversion any effluent received from a sewerage system, that the received directly from any sewerage system,

C. Water used for irrigated agriculture, for watering of lawns, trees, gardens or shrubs, or for irrigation for a period not to exceed five years for the revegetation of any disturbed land area, unless that water is regulations,

B. Effluent which is regulated pursuant to 20 7 3 NMAC, "Liquid Waste Disposal and Treatment" to obtain the appropriate samples, this exemption shall not apply;

A. Effluent or leachate which conforms to all the standards in Subsections A, B, and C of Section 20 6 2 3103 NMAC and has a total nitrogen concentration of 10 mg/l or less. To determine conformance, samples may be taken by the agency before the effluent or leachate is discharged so that it may move directly or indirectly into ground water; provided that if the discharge is by seepage through non-natural or altered natural materials, the agency may take samples of the solution before or after seepage. If for any reason the agency does not have access

20 6 2 3105 EXEMPTIONS FROM DISCHARGE PERMIT REQUIREMENT: Sections 20 6 2 3104 and 20 6 2 3106 NMAC do not apply to the following

A. Effluent or leachate which conforms to all the standards in Subsections A, B, and C of Section 20 6 2 3103 NMAC and has a total nitrogen concentration of 10 mg/l or less. To determine conformance, samples may be taken by the agency before the effluent or leachate is discharged so that it may move directly or indirectly into ground water; provided that if the discharge is by seepage through non-natural or altered natural materials, the agency may take samples of the solution before or after seepage. If for any reason the agency does not have access to obtain the appropriate samples, this exemption shall not apply;

B. Effluent which is regulated pursuant to 20 7 3 NMAC, "Liquid Waste Disposal and Treatment" regulations,

C. Water used for irrigated agriculture, for watering of lawns, trees, gardens or shrubs, or for irrigation for a period not to exceed five years for the revegetation of any disturbed land area, unless that water is received directly from any sewerage system,

D. Discharges resulting from the transport or storage of water diverted, provided that the water diverted has not had added to it after the point of diversion any effluent received from a sewerage system, that the source of the water diverted was not mine workings, and that the secretary has not determined that a hazard to public health may result;

E. Effluent which is discharged to a watercourse which is naturally perennial; discharges to dry arroyos and ephemeral streams are not exempt from the discharge permit requirement, except as otherwise provided in this section,

20 6 2 3104 DISCHARGE PERMIT REQUIRED: Unless otherwise provided by this Part, no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water unless he is discharging pursuant to a discharge permit issued by the secretary. When a permit has been issued, discharges must be consistent with the terms and conditions of the permit. In the event of a transfer of the ownership, control, or possession of a facility for which a discharge permit is in effect, the transferee shall have authority to discharge under such permit, provided that the transferee has complied with Section 20 6 2 3111 NMAC, regarding transfers [2-18-77, 12-24-87, 12-1-95, Rn & A, 20 6 2 3104 NMAC - 20 NMAC 6.2.III 3104, 1-15-01, A, 12-1-01]

20 6 2 3105 EXEMPTIONS FROM DISCHARGE PERMIT REQUIREMENT: Sections 20 6 2 3104 and 20 6 2 3106 NMAC do not apply to the following

A. Effluent or leachate which conforms to all the standards in Subsections A, B, and C of Section 20 6 2 3103 NMAC and has a total nitrogen concentration of 10 mg/l or less. To determine conformance, samples may be taken by the agency before the effluent or leachate is discharged so that it may move directly or indirectly into ground water; provided that if the discharge is by seepage through non-natural or altered natural materials, the agency may take samples of the solution before or after seepage. If for any reason the agency does not have access to obtain the appropriate samples, this exemption shall not apply;

B. Effluent which is regulated pursuant to 20 7 3 NMAC, "Liquid Waste Disposal and Treatment" regulations,

C. Water used for irrigated agriculture, for watering of lawns, trees, gardens or shrubs, or for irrigation for a period not to exceed five years for the revegetation of any disturbed land area, unless that water is received directly from any sewerage system,

D. Discharges resulting from the transport or storage of water diverted, provided that the water diverted has not had added to it after the point of diversion any effluent received from a sewerage system, that the source of the water diverted was not mine workings, and that the secretary has not determined that a hazard to public health may result;

E. Effluent which is discharged to a watercourse which is naturally perennial; discharges to dry arroyos and ephemeral streams are not exempt from the discharge permit requirement, except as otherwise provided in this section,

Standards for Irrigation Use - Ground water shall meet the standards of Subsection A, B, and C of this section unless otherwise provided.

(1) Aluminum (Al) (CAS 7429-90-5) 5 0 mg/l

(2) Boron (B) (CAS 7440-42-8) 0 75 mg/l

(3) Cobalt (Co) (CAS 7440-48-4) 0 05 mg/l

(4) Molybdenum (Mo) (CAS 7439-98-7) 1 0 mg/l

(5) Nickel (Ni) (CAS 7440-02-0) 0 2 mg/l

D. For purposes of application of the amended numeric standards for arsenic, cadmium, lead, combined radium-226 & radium-228, benzene, PCBs, carbon tetrachloride, EDC, PCE, TCE, ethylbenzene, PCBs, 1,1,2-trichloroethane and benzo-a-pyrene shall not apply unless the secretary notifies the responsible person that the site is a source of these contaminants in ground water that pose a hazard to public health

[2-18-77, 1-29-82, 11-17-83, 3-3-86, 12-1-95, 20 6 2 3103 NMAC - Rn, 20 NMAC 6.2.III 3103, 1-15-01, A, 9-26-04, A, 12-21-18]

[Note. For purposes of application of the amended numeric uranium standard to past and current water discharges (as of 9-26-04), the new standard will not become effective until June 1, 2007.]

5/3/2024

Page 17 of 19

Released to Imaging: 7/24/2024 4:45:59 PM

41793

Loc: 880

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-41793-2
SDG Number: 19-0112-49

Login Number: 41793
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-41793-2

SDG Number: 19-0112-49

Login Number: 41793

List Number: 3

Creator: Thornley, Richard W

List Source: Eurofins St. Louis

List Creation: 04/04/24 03:25 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 5/8/2024 10:26:17 AM

JOB DESCRIPTION

EBDU #37
19-0112-49

JOB NUMBER

880-43023-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

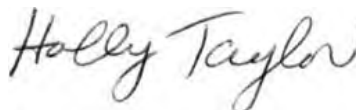
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
5/8/2024 10:26:17 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Laboratory Job ID: 880-43023-1
SDG: 19-0112-49

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QC Sample Results	7
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Lab Chronicle	9
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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-43023-1
SDG: 19-0112-49

Qualifiers

Metals	
Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project: EBDU #37

Job ID: 880-43023-1

Job ID: 880-43023-1

Eurofins Midland

Job Narrative
880-43023-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 5/3/2024 8:24 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-43023-1
SDG: 19-0112-49

Client Sample ID: Windmill

Lab Sample ID: 880-43023-1

Date Collected: 05/02/24 13:09

Matrix: Water

Date Received: 05/03/24 08:24

Method: EPA 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.220		0.00400	mg/L		05/07/24 12:00	05/07/24 18:39	1

Client Sample ID: TMW -1

Lab Sample ID: 880-43023-2

Date Collected: 05/02/24 13:18

Matrix: Water

Date Received: 05/03/24 08:24

Method: EPA 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.445		0.00400	mg/L		05/07/24 12:00	05/07/24 18:54	1

Client Sample ID: TMW -3

Lab Sample ID: 880-43023-3

Date Collected: 05/02/24 13:28

Matrix: Water

Date Received: 05/03/24 08:24

Method: EPA 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.0299		0.00400	mg/L		05/07/24 12:00	05/07/24 18:56	1

Client Sample ID: TMW -21

Lab Sample ID: 880-43023-4

Date Collected: 05/02/24 13:45

Matrix: Water

Date Received: 05/03/24 08:24

Method: EPA 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.0470		0.00400	mg/L		05/07/24 12:00	05/07/24 18:58	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-43023-1
SDG: 19-0112-49

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LLCS 860-158872/4-A
Matrix: Water
Analysis Batch: 158963

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 158872

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	0.00400	0.003274	J	mg/L		82	50 - 150

Lab Sample ID: MB 860-158841/1-B
Matrix: Water
Analysis Batch: 158963

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 158872

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00400	U	0.00400	mg/L		05/07/24 12:00	05/07/24 18:33	1

Lab Sample ID: LCS 860-158841/2-B
Matrix: Water
Analysis Batch: 158963

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 158872

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	0.100	0.09549		mg/L		95	85 - 115

Lab Sample ID: LCSD 860-158841/3-B
Matrix: Water
Analysis Batch: 158963

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 158872

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Barium	0.100	0.09538		mg/L		95	85 - 115	0	20

Lab Sample ID: 880-43023-1 MS
Matrix: Water
Analysis Batch: 158963

Client Sample ID: Windmill
Prep Type: Dissolved
Prep Batch: 158872

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	0.220		0.100	0.3177		mg/L		98	70 - 130

Lab Sample ID: 880-43023-1 MSD
Matrix: Water
Analysis Batch: 158963

Client Sample ID: Windmill
Prep Type: Dissolved
Prep Batch: 158872

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Barium	0.220		0.100	0.3228		mg/L		103	70 - 130	2	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-43023-1
SDG: 19-0112-49

Metals

Filtration Batch: 158841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43023-1	Windmill	Dissolved	Water	Filtration	
880-43023-2	TMW -1	Dissolved	Water	Filtration	
880-43023-3	TMW -3	Dissolved	Water	Filtration	
880-43023-4	TMW -21	Dissolved	Water	Filtration	
MB 860-158841/1-B	Method Blank	Dissolved	Water	Filtration	
LCS 860-158841/2-B	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 860-158841/3-B	Lab Control Sample Dup	Dissolved	Water	Filtration	
880-43023-1 MS	Windmill	Dissolved	Water	Filtration	
880-43023-1 MSD	Windmill	Dissolved	Water	Filtration	

Prep Batch: 158872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43023-1	Windmill	Dissolved	Water	200.8	158841
880-43023-2	TMW -1	Dissolved	Water	200.8	158841
880-43023-3	TMW -3	Dissolved	Water	200.8	158841
880-43023-4	TMW -21	Dissolved	Water	200.8	158841
MB 860-158841/1-B	Method Blank	Dissolved	Water	200.8	158841
LCS 860-158841/2-B	Lab Control Sample	Dissolved	Water	200.8	158841
LCSD 860-158841/3-B	Lab Control Sample Dup	Dissolved	Water	200.8	158841
LLCS 860-158872/4-A	Lab Control Sample	Total Recoverable	Water	200.8	
880-43023-1 MS	Windmill	Dissolved	Water	200.8	158841
880-43023-1 MSD	Windmill	Dissolved	Water	200.8	158841

Analysis Batch: 158963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43023-1	Windmill	Dissolved	Water	200.8	158872
880-43023-2	TMW -1	Dissolved	Water	200.8	158872
880-43023-3	TMW -3	Dissolved	Water	200.8	158872
880-43023-4	TMW -21	Dissolved	Water	200.8	158872
MB 860-158841/1-B	Method Blank	Dissolved	Water	200.8	158872
LCS 860-158841/2-B	Lab Control Sample	Dissolved	Water	200.8	158872
LCSD 860-158841/3-B	Lab Control Sample Dup	Dissolved	Water	200.8	158872
LLCS 860-158872/4-A	Lab Control Sample	Total Recoverable	Water	200.8	158872
880-43023-1 MS	Windmill	Dissolved	Water	200.8	158872
880-43023-1 MSD	Windmill	Dissolved	Water	200.8	158872

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-43023-1
SDG: 19-0112-49

Client Sample ID: Windmill
Date Collected: 05/02/24 13:09
Date Received: 05/03/24 08:24

Lab Sample ID: 880-43023-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			250 mL	250 mL	158841	05/06/24 09:53	AGR	EET HOU
Dissolved	Prep	200.8			50 mL	50 mL	158872	05/07/24 12:00	MD	EET HOU
Dissolved	Analysis	200.8		1			158963	05/07/24 18:39	DP	EET HOU

Client Sample ID: TMW -1
Date Collected: 05/02/24 13:18
Date Received: 05/03/24 08:24

Lab Sample ID: 880-43023-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			250 mL	250 mL	158841	05/06/24 09:53	AGR	EET HOU
Dissolved	Prep	200.8			50 mL	50 mL	158872	05/07/24 12:00	MD	EET HOU
Dissolved	Analysis	200.8		1			158963	05/07/24 18:54	DP	EET HOU

Client Sample ID: TMW -3
Date Collected: 05/02/24 13:28
Date Received: 05/03/24 08:24

Lab Sample ID: 880-43023-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			250 mL	250 mL	158841	05/06/24 09:53	AGR	EET HOU
Dissolved	Prep	200.8			50 mL	50 mL	158872	05/07/24 12:00	MD	EET HOU
Dissolved	Analysis	200.8		1			158963	05/07/24 18:56	DP	EET HOU

Client Sample ID: TMW -21
Date Collected: 05/02/24 13:45
Date Received: 05/03/24 08:24

Lab Sample ID: 880-43023-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			250 mL	250 mL	158841	05/06/24 09:53	AGR	EET HOU
Dissolved	Prep	200.8			50 mL	50 mL	158872	05/07/24 12:00	MD	EET HOU
Dissolved	Analysis	200.8		1			158963	05/07/24 18:58	DP	EET HOU

Laboratory References:
EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-43023-1
SDG: 19-0112-49

Laboratory: Eurofins Houston

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215	06-30-24

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Method Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-43023-1
SDG: 19-0112-49

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	EET HOU
200.8	Preparation, Total Recoverable Metals	EPA	EET HOU
Filtration	Sample Filtration	None	EET HOU

- Protocol References:**
- EPA = US Environmental Protection Agency
 - None = None
- Laboratory References:**
- EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: EBDU #37

Job ID: 880-43023-1
SDG: 19-0112-49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-43023-1	Windmill	Water	05/02/24 13:09	05/03/24 08:24
880-43023-2	TMW -1	Water	05/02/24 13:18	05/03/24 08:24
880-43023-3	TMW -3	Water	05/02/24 13:28	05/03/24 08:24
880-43023-4	TMW -21	Water	05/02/24 13:45	05/03/24 08:24

- 1
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- 12
- 13

No. 3311
CHAIN-OF-CUSTODY

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-43023-1
SDG Number: 19-0112-49

Login Number: 43023
List Number: 1
Creator: Vasquez, Julisa

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-43023-1
SDG Number: 19-0112-49

Login Number: 43023
List Number: 2
Creator: Baker, Jeremiah

List Source: Eurofins Houston
List Creation: 05/04/24 11:25 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, EBDU #37
Lea County, New Mexico

Sample	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)	Barium (mg/L)
WQCC Standard:		*0.005	*1	*0.7	*0.62	**250	**1,000	2.0
Windmill	¹ 08/01/2019	<0.001	<0.001	<0.001	<0.003	232	732	--
	² 09/23/2019	--	--	--	--	--	--	--
	² 12/26/2019	<0.000800	<0.00200	<0.00200	<0.00200	259	688	--
	³ 09/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	274	730	--
	³ 12/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	287	930	--
	³ 03/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	252	745	--
	³ 06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	255	781	--
	⁴ 10/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	251	800	--
	⁴ 12/22/2021	<0.00200	<0.00200	<0.00200	<0.00400	246	751	--
	⁴ 03/03/2022	<0.00200	<0.00200	<0.00200	<0.00400	256	828	--
	⁴ 05/23/2022	<0.00200	<0.00200	<0.00200	<0.00400	222	738	--
	⁴ 08/16/2022	<0.00200	<0.00200	<0.00200	<0.00400	256	1,190	--
	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	198	508	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	401	1,130	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	276	852	--
	⁴ 09/07/2023	<0.00200	<0.00200	<0.00400	<0.00400	350	981	--
	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	409	1,010	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	471	1,080	--
	04/03/2024	--	--	--	--	--	--	2.18
	05/02/2024	--	--	--	--	--	--	0.220
TMW-1	² 09/23/2019	<0.00800	<0.00200	<0.00200	<0.00200	37.4	400	--
	² 12/26/2019	<0.000800	<0.00200	<0.00200	<0.00200	21.1	390	--
	³ 09/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	22.6	390	--
	³ 12/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	13.1	383	--
	³ 03/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	10.9	360	--
	³ 06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	14.5	360	--
	³ 10/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	17.5	358	--
	⁴ 12/22/2021	<0.00200	<0.00200	<0.00200	<0.00400	10.3	391	--
	⁴ 03/01/2022	<0.00200	<0.00200	<0.00200	<0.00400	13.2	343	--
	⁴ 05/23/2022	<0.00200	<0.00200	<0.00200	<0.00400	26.0	369	--
	⁴ 08/16/2022	<0.00200	<0.00200	<0.00200	<0.00400	50.3	404	--
	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	21.4	216	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	41.9	358	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	275	845	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	277	830	--
	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	156	662	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00404	136	551	--
	05/02/2024	--	--	--	--	--	--	0.445
TMW-2	² 09/23/2019	<0.00800	<0.00200	<0.00200	<0.00200	338	1,220	--
	² 12/26/2019	<0.000800	<0.00200	<0.00200	<0.00200	307	1,170	--
	³ 09/30/2020	<0.00200	0.00227	<0.00200	<0.00200	314	1,040	--
	³ 12/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	298	1,050	--
	³ 03/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	293	1,000	--
	³ 06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	267	1,050	--
	⁴ 10/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	263	1,030	--
	⁴ 12/22/2021	<0.00200	<0.00200	<0.00200	<0.00400	284	1,270	--
	⁴ 03/01/2022	<0.00200	<0.00200	<0.00200	<0.00400	282	1,030	--
	⁴ 05/23/2022	<0.00200	<0.00200	<0.00400	<0.00400	256	1,070	--
	⁴ 08/16/2022	<0.00200	<0.00200	<0.00400	<0.00400	239	940	--

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, EBDU #37
Lea County, New Mexico

Sample	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)	Barium (mg/L)
WQCC Standard:		*0.005	*1	*0.7	*0.62	**250	**1,000	2.0
	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	195	985	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	211	1,060	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	248	1,120	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	270	1,050	--
	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	264	1,100	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	249	992	--
TMW-3	09/23/2019	--	--	--	--	--	--	--
	12/26/2019	--	--	--	--	--	--	--
	³ 09/30/2020	<0.00200	0.00322	<0.00200	0.00448	212	891	--
	³ 12/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	214	948	--
	³ 03/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	213	900	--
	³ 06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	180	934	--
	⁴ 10/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	192	967	--
	⁴ 12/22/2021	<0.00200	<0.00200	<0.00200	<0.00400	211	949	--
	⁴ 03/01/2022	<0.00200	<0.00200	<0.00200	<0.00400	233	944	--
	⁴ 05/23/2022	<0.00200	<0.00200	<0.00200	<0.00400	202	955	--
	⁴ 08/16/2022	<0.00200	<0.00200	<0.00200	<0.00400	245	1,100	--
	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	175	808	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	233	940	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	229	1,020	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	240	1,010	--
	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	242	1,020	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	234	959	--
	05/02/2024	--	--	--	--	--	--	0.0299
TMW-4	09/23/2019	--	--	--	--	--	--	--
	12/26/2019	--	--	--	--	--	--	--
	³ 09/30/2020	<0.00200	0.00314	<0.00200	<0.00200	1,020	2,040	--
	³ 12/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	987	2,300	--
	³ 03/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	834	1,960	--
	³ 06/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	745	1,990	--
	⁴ 10/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	689	1,990	--
	⁴ 12/22/2021	<0.00200	<0.00200	<0.00200	<0.00400	735	2,180	--
	⁴ 03/01/2022	<0.00200	<0.00200	<0.00200	<0.00400	1,610	2,080	--
	⁴ 03/29/2022	<0.00200	<0.00200	<0.00200	0.00700	547	1,930	--
	⁴ 05/23/2022	<0.00200	<0.00200	<0.00200	<0.00400	522	1,930	--
	⁴ 08/16/2022	<0.00200	<0.00200	<0.00200	<0.00400	684	2,000	--
	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	486	1,940	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	703	1,850	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	673	1,900	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	625	1,810	--
	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	598	1,750	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	580	1,750	--
TMW-5	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	1,170	4,950	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	2,890	5,200	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	2,790	5,380	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	2,700	4,590	--
	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	2,320	4,250	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	2,980	5,360	--

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, EBDU #37
Lea County, New Mexico

Sample	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)	Barium (mg/L)
WQCC Standard:		*0.005	*1	*0.7	*0.62	**250	**1,000	2.0
TMW-6	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	941	3,160	--
	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	2,270	3,200	--
	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	1,550	3,260	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	1,630	2,820	--
	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	1,570	3,070	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	1,500	3,280	--
TMW-7	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	1,770	3,980	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	1,870	3,880	--
	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	1,770	3,720	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	1,740	3,690	--
TMW-8	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	974	2,410	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	1,130	2,470	--
	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00200	709	1,840	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	655	1,830	--
TMW-9	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	18.0	373	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	41.8	390	--
	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	37.3	404	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	29.3	373	--
TMW-10	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	9.89	525	--
	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	67.0	514	--
	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	114.0	666	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	17.0	405	--
TMW-11	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	350	1,190	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	318	1,090	--
TMW-12	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	463	1,520	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	448	1,390	--
TMW-13	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	1,730	3,680	--
	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	1,690	3,480	--
TMW-14	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	2,500	5,140	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	1,810	2,820	--
TMW-15	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	2,120	3,870	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	2,160	3,400	--
TMW-16	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	85.5	495	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	43.0	380	--
TMW-17	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	5,850	10,300	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	5,680	8,930	--
TMW-18	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	2,050	6,430	--

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, EBDU #37
Lea County, New Mexico

Sample	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)	Barium (mg/L)
WQCC Standard:		*0.005	*1	*0.7	*0.62	**250	**1,000	2.0
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	908	1,650	--
TMW-19	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	927	1,860	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	553	1,070	--
TMW-20	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	287	927	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	385	937	--
TMW-21	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	262	885	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	310	902	0.0471
	05/02/2024	--	--	--	--	--	--	
TMW-22	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	270	939	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	342	918	--
TMW-23	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	895	1,980	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	1,020	2,020	--
TMW-24	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	271	1,050	--
	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	330	1,060	--
DUP-1 (Windmill)	³ 09/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	276	794	--
DUP-1 (Windmill)	³ 12/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	278	908	--
DUP-1 (Windmill)	³ 03/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	259	798	--
DUP-1 (Windmill)	³ 06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	256	781	--
DUP-1 (Windmill)	⁴ 10/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	250	830	--
DUP-1 (Windmill)	⁴ 12/22/2021	<0.00200	<0.00200	<0.00200	<0.00400	243	796	--
Dup-1 (TMW-2)	⁴ 03/01/2022	<0.00200	<0.00200	<0.00200	<0.00400	297	1,010	--
Dup-2 (Windmill)	⁴ 03/03/2022	<0.00200	<0.00200	<0.00200	<0.00400	491	787	--
Dup-1 (Windmill)	⁴ 05/23/2022	<0.00200	<0.00200	<0.00200	<0.00400	215	729	--
Dup-1 (Windmill)	⁴ 08/16/2022	<0.00200	<0.00200	<0.00200	<0.00400	283	1,120	--
Dup-1 (TMW-5)	⁴ 12/15/2022	<0.00100	<0.00100	<0.00100	<0.00100	1,410	4,520	--
Dup-1 (Windmill)	⁴ 03/14/2023	<0.00100	<0.00100	<0.00100	<0.00100	413	1,130	--
Dup-1 (Windmill)	⁴ 06/22/2023	<0.00200	<0.00200	<0.00200	<0.00200	273	855	--
Dup-1 (TMW-5)	⁴ 09/06/2023	<0.00200	<0.00200	<0.00200	<0.00400	3,030	5,850	--
Dup-1 (TMW-17)	⁴ 12/20/2023	<0.00200	<0.00200	<0.00200	<0.00400	5,830	10,300	--
Dup-2 (TMW-2)	⁴ 12/21/2023	<0.00100	<0.00100	<0.00100	<0.0100	265	1,010	--
Dup-1 (TMW-3)	⁴ 03/14/2024	<0.00200	<0.00200	<0.00200	<0.00400	328	986	--
Dup-2 (TMW-14)	⁴ 03/15/2024	<0.00200	<0.00200	<0.00200	<0.00400	1,330	2,530	--

Notes:

(¹): analysis performed by Cardinal Laboratories, Hobbs, New Mexico, by EPA SW-846 Method 8021B (BTEX) and titration methods (chloride and TDS).

(²): analysis performed by DHL Analytical, Round Rock, Texas, by EPA SW-846 Method 8021B (BTEX) and Method 300 (chloride).

(³): analysis performed by Xenco Laboratories, Midland, Texas, by EPA SW-846 Method 8021B (BTEX) and Method 300 (chloride).

(⁴): analysis performed by Eurofins-Xenco, Midland, Texas, by EPA SW-846 Method 8021B (BTEX) and Method 300 (chloride).

<: concentration is less than analytical method reporting limit (RL).

*: NMWQCC Human Health Standard

**: NMWQCC Domestic Water Quality Standard

--: no data available

All values reported in milligrams per liter (mg/L) equivalent to parts per million (ppm)

Bold and highlighted denotes analyte concentration exceeds WQCC domestic water quality standard

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, EBDU #37
Lea County, New Mexico

Sample	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)	Barium (mg/L)
WQCC Standard:		*0.005	*1	*0.7	*0.62	**250	**1,000	2.0

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, EBDU #37
Lea County, New Mexico

Sample	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)	Barium (mg/L)
WQCC Standard:		*0.005	*1	*0.7	*0.62	**250	**1,000	2.0

20.6.2.3101 NMAC

Laboratory Analytical Data Summary
Windmill, EBDU 37, Lea County, New Mexico

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20.6.2.3103 NMAC - Human Health Standards							
A.	Parameter	mg/L	4/3/2024	5/2/2024			
(a)	Antimony	0.006	<0.00400	--			
(b)	Arsenic	0.01	<0.00400	--			
(c)	Barium	2.0	2.18	*0.220			
(d)	Beryllium	0.004	<0.00200	--			
(e)	Cadmium	0.005	<0.00200	--			
(f)	Chromium	0.05	<0.00400	--			
(g)	Cyanide	0.2	<0.00500	--			
(h)	Fluoride	1.6	<1.00	--			
(i)	Lead	0.015	<0.00200	--			
(j)	Mercury (Total)	0.002	<0.000200	--			
(k)	Nitrate	10.0	2.78	--			
(l)	Nitrite	1.0	<0.100	--			
(m)	Selenium	0.05	<0.00200	--			
(n)	Silver	0.05	<0.00200	--			
(o)	Thallium	0.002	<0.00200	--			
(p)	Uranium	0.03	0.00315	--			
(q)	Radioactivity (combined R226 and R228)	5.0	0.945	--			
(r)	Benzene	0.005	<0.00100	--			
(s)	Polychlorinated biphenyls (PCB)	0.0005	<0.000262	--			
(t)	Toluene	1.0	<0.00100	--			
(u)	Carbon Tetrachloride	0.005	<0.00500	--			
(v)	1,2-dichloroethane (EDC)	0.005	<0.00100	--			
(w)	1,1-dichloroethylene	0.007	<0.00100	--			
(x)	Tetrachloroethylene (PCE)	0.005	<0.00100	--			
(y)	Trichloroethylene (TCE)	0.005	<0.00500	--			
(z)	Ethylbenzene	0.70	<0.00100	--			
(aa)	Xylenes (Total)	0.62	<0.0100	--			
(bb)	Methylene Chloride	0.005	<0.00500	--			
(cc)	Chloroform	0.1	<0.00100	--			
(dd)	1,1-Dichloroethane	0.025	<0.00100	--			
(ee)	Ethylene Dibromide (EDB)	0.00005	<0.00500	--			
(ff)	1,1,1-trichloroethane	0.20	<0.00100	--			
(gg)	1,1,2-trichloroethane	0.005	<0.00100	--			
(hh)	1,1,2,2-tetrachloroethane	0.01	<0.00100	--			
(ii)	vinyl chloride	0.002	<0.002	--			
(jj)	PAHs: total naphthalene plus monomethylnaphthalenes	0.03	<0.571	--			
(kk)	benzo-a-pyrene	0.0002	<0.571	--			
(ll)	cis-1,2-dichloroethene	0.07	<0.00100	--			
(mm)	trans-1,2-dichloroethene	0.1	<0.00100	--			
(nn)	1,2-dichloropropane (PDC)	0.005	<0.00500	--			
(oo)	Styrene	0.1	<0.00100	--			
(pp)	1,2-dichlorobenzene	0.60	<0.00100	--			
(qq)	1,4-dichlorobenzene	0.075	<0.00100	--			
(rr)	1,2,4-trichlorobenzene	0.07	<0.00500	--			
(ss)	pentachlorophenol	0.001	<1.14	--			
(tt)	atrazine	0.003	<0.500	--			

20.6.2.3101 NMAC

Laboratory Analytical Data Summary

Windmill, EBDU 37, Lea County, New Mexico

Page 2 of 2

20.6.2.3103 NMAC - Standards for Domestic Water Supply

B.	Parameter	mg/L	4/3/2024				
(1)	Chloride	250.0	440	--			
(2)	Copper	1.0	0.00509	--			
(3)	Iron	1.0	<0.100	--			
(4)	Manganese	0.2	<0.00200	--			
(5)	Phenols	0.005	<0.0100	--			
(6)	Sulfate	600.0	56.5	--			
(7)	Total Dissolved Solids (TDS)	1,000.0	1,000	--			
(8)	Zinc	10.0	0.00465	--			
(9)	pH	6 - 9	7.3	--			
(10)	Methy tertiary-butyl ether (MTBE)	0.1	<0.00500	--			

20.6.2.3103 NMAC - Standards for Irrigation Use

B.	Parameter	mg/L	4/3/2024	5/2/2024			
(1)	Aluminum	5.0	<0.0200	--			
(2)	Boron	0.75	0.154	--			
(3)	Cobalt	0.05	<0.00200	--			
(4)	Molybdenum	1.0	<0.00200	--			
(5)	Nickel	0.2	<0.00200	--			

Notes: Analysis performed by Eurofins Xenco Laboratories, Midland, Texas, by EPA SW-846 Methods.

All values reported in milligrams per liter (mg/L) equivalent to parts per million (ppm)

< Indicates analyte concentration is less than reporting limit (RL)

Bold indicates analyte concentration exceeds the reporting limit (RL) but below the regulatory limit**Bold and highlighted indicates analyte concentration exceeds RL and regulatory limit**

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 342416

CONDITIONS

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID:
	873
	Action Number: 342416
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	As a result of significant differences in groundwater flow direction at the source area shown between Figure 5a and Figure 5b from December 2023 to March 2024 in the SOW, a denser network of monitoring wells is necessary to better characterize the mass source in the area. Apache Corporation must develop the following within ninety (90) days of this approval date for additional well borings and the subsequent conditions of approval below. The coordinates for each additional monitoring well required for installation by OCD are included in conditions 1. (a through n). 1a. TMW-30 shall be installed approximately 430 feet east of the TMW-28 well proposal, and 50 feet south. Better defining background concentrations. (32.482591, -103.120003)	7/24/2024
michael.buchanan	1b. TMW-31 shall be installed approximately 350 feet northwest of TMW-22. Reduces the distance between TMW-12 and TMW-22 for more precise characterization. (32.481806, -103.119008) 1c. TMW-32 shall be installed approximately 275 feet east of TMW-12. Reduces distance between adjacent wells for more precise characterization. (32.481354, -103.119876) 1d. TMW-33 shall be installed approximately 415 feet southwest of TMW-22. Reduces the distance between TMW-21 and TMW-13 for more precise characterization. (32.480643, -103.118728) 1e. TMW-34 shall be installed approximately 350 feet west of TMW-14. Achieves more characterization near TMW-17 which conveys a high chloride level. (32.479492, -103.120080) 1f. TMW-35 shall be installed approximately 190 feet northeast of TMW-15 Addresses more necessary characterization near TMW-17 (32.479341, -103.119302)	7/24/2024
michael.buchanan	1g. TMW-36 shall be installed approximately 175 feet southwest of TMW-17. Addresses need for more characterization near TMW-17 (32.478749, -103.120871) 1h. TMW-37 shall be installed approximately 275 feet southeast of TMW-17. Addresses need for more characterization near TMW-17. (32.478577, -103.119850) 1i. TMW-38 shall be installed approximately 300 feet northwest of proposed TMW-26. More characterization and assessment needed in the southeast region of the release area. (32.477683, -103.119429) 1j. TMW-39 shall be installed approximately 200 feet southeast of TMW-18. The release area in southeast area needs tighter monitoring network of characterization and assessment for chloride. (32.477447, -103.120144) 1k. TMW-40 shall be installed approximately 200 feet southeast of TMW-16. Addresses lack of characterization and assessment between MW-19 and MW-18 (32.477640, -103.121407)	7/24/2024
michael.buchanan	1l. TMW-41 shall be installed approximately 275 feet east of TMW-24. Addresses lack of characterization and assessment between TMW-24 and TMW-23 (32.476499, -103.121560) 1m. TMW-42 shall be installed approximately 220 feet east of TMW-23. Addresses lack of characterization and assessment between TMW-25 and TMW-26 (32.476456, -103.119774) 1n. TMW-42 shall be installed approximately 75 feet NE of TMW-13. Addresses lack of characterization between TMW-13 and TMW-22. (32.481185, -103.1189847) 2. A current and up-to-date site map showing proposed monitoring wells in the SOW, and the additional thirteen (14) monitoring wells prescribed by OCD for further characterization and assessment of chlorides and BTEX. 3. Any quarterly monitoring collected to the present (summary table and lab analyses are sufficient).	7/24/2024
michael.buchanan	4. The windmill well must be sampled and analyzed for barium in the next round of groundwater monitoring. 5. Both TMW #5 and TMW #17 must be sampled for all human health standard constituents in the NM WQCC list in subsections A, B and C of 20.6.2.3103 NMAC as these two wells had the highest concentrations of contamination. 6. All proposed monitoring wells in the Scope of Work for Additional Investigation and the additional required monitoring wells by OCD must have soil sample analyses for TPH, chloride, and BTEX by EPA Methods 8260, EPA Method 300 and EPA Method 8015. Five (5) foot interval composite samples are acceptable. 7. Drilling for all wells is required to commence within ninety (90) days from this date of approval.	7/24/2024
michael.buchanan	8. 19.15.5.11 ENFORCEABILITY OF PERMITS AND ADMINISTRATIVE ORDERS: A person who conducts an activity pursuant to a permit, administrative order or other written authorization or approval from the division shall comply with every term, condition and provision of the permit, administrative order, authorization or approval. [19.15.5.11 NMAC - Rp, 19.15.1.41 NMAC, 12/1/2008]	7/24/2024